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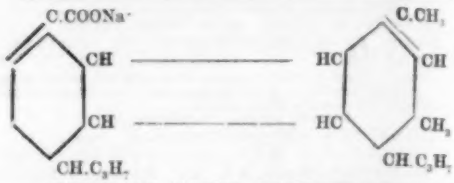

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A Clinical Lecture
ON
APPENDICOSTOMY AND ITS POSSIBILITIES.

Delivered at St. George's Hospital on Dec. 14th, 1905,

BY SIR WILLIAM H. BENNETT, K.C.V.O., F.R.C.S. ENG.,
CONSULTING SURGEON TO ST. GEORGE'S HOSPITAL, ETC.

GENTLEMEN,—The patient before us is, as you see, a woman of middle age who is under the care of Dr. W. Ewart. She has been for a long time suffering from symptoms pointing pretty clearly to what is known as ulcerative colitis, by which it is evident she has been reduced to the last degree of emaciation and weakness. The usual remedies having failed to bring about any improvement in her condition I was asked to see the case with a view to affording by surgical means facilities for a thorough irrigation of the whole of the large intestine. The history of the case is set forth in the registrar's notes,[1] but it is not necessary that it should be given in detail here, as it is sufficient for my purpose to assume that the nature of the case is as I have stated and that irrigation of the large intestine, all other methods having been tried without avail, seemed to be the only feasible plan of treatment.

In ordinary circumstances the flushing of the whole of the large intestine is by no means a simple proceeding; attempts at effecting it by injections from the rectum, however cunningly managed by means of the long tube or otherwise, are necessarily, from the nature of things, often ineffectual, and the only alternatives available until comparatively recently—namely, proximal colotomy or cæcotomy—are open to grave objections to which I shall presently refer. I therefore advised that the vermiform appendix should be utilised in this case as a means for introducing the irrigation. Appendicostomy was therefore performed, an operation which has until now been but little used—this is the first time that it has been done in St. George's Hospital—but which has been recently brought into prominent notice by an admirable communication read at the last meeting of the British Medical Association by Mr. C. R. B. Keetley.[2] The operation is in ordinary circumstances simplicity itself, as those of you who saw the proceeding in this patient's case can readily understand. An oblique opening into the abdomen in the direction of the fibres of the external oblique at the spot usually selected for the incision for removal of the appendix large enough to admit two fingers is made, the aponeurosis and subjacent muscular tissues being split in the ordinary way. The edges of the divided peritoneum having been held up by pressure forceps one or two fingers are introduced, the appendix is searched for and hooked up, a very simple proceeding if there are no adhesions. In the present case some recent adhesions about the cæcum complicated matters a little but caused, as you saw, no real difficulty. The appendix having been thus drawn out through the wound until its base is in contact with the parietal peritoneum is fixed in this position by a fine stitch of catgut or silk passing through the meso-appendix and adjacent edges of the peritoneum, care being taken to see that it is not twisted or kinked in the process. This stitch on being tightened up also serves to diminish the opening in the peritoneum.

In order to avoid any possibility of strangulation of the included meso-appendix this suture may be knotted after it has been passed through that structure before its ends are utilised for approximating the edges of the peritoneum. Fixation of the protruding appendix is even more simply effected, when there is no necessity for immediately opening it, by passing a sterilised safety-pin through it on each side between the muscular and mucous coats and closing up the abdominal wound beneath the pins (see illustration). On the day following the operation in this case the protruding appendix was divided with sharp scissors a quarter of an inch from the level of the abdominal wall and finally secured in position by two stitches of silk fixing it to the skin. These stitches, although probably not absolutely necessary, are desirable in order to avoid any possibility of undue retraction of the stump. No discomfort or other disadvantage has arisen, as you see, from the operation. No reaction of any kind has occurred, and on this the fourth day, so far as the operation is concerned, the patient is unconscious of anything abnormal. A full-size soft rubber catheter passes down the appendix into the cæcum without the patient being conscious of its presence; no regurgitation or moisture comes from the stump. The sphincter at the cæcal orifice of the appendix grips the catheter firmly and closes completely after its withdrawal. An ideal state of affairs, in fact, exists for the application of remedies by irrigation, &c., to the whole length of the large intestine by means of an appropriate flexible tube passed into the cæcum through the stump of the appendix. A comparison of the condition of affairs existing in this case now with that which would have been present if either of the other alternatives to which I have referred—

Appendix fixed in position by safety-pins.

viz., colotomy or cæcotomy—had been employed strongly emphasises the disadvantages connected with these, especially the discomfort and at times serious complications which arise from the escape of the contents of the bowel, with the accompanying irritation of the skin about the region of the opening in consequence of the entire absence of spontaneous power of control. Perhaps, however, the most striking superiority of appendicostomy as compared with the other methods mentioned is the ease and certainty with which the adventitious opening can be closed after it has ceased to be of use. All that is necessary in the case of appendicostomy is to cut down and to isolate the stump of the appendix, to deal with it as in a case of removal of the appendix, to drop it back into the peritoneal cavity, and to bring together the abdominal wound in the ordinary way; the difficulties, on the other hand, sometimes arising in attempts to close the colotomy or cæcotomy opening are too well known to require comment. In cases of cæcotomy there is the further objection that in consequence sometimes of the free passing away of the contents of the bowel, immediately after they emerge from the small intestine, through the opening in the abdominal wall a condition, in weak subjects, verging upon starvation rapidly supervenes.

The occurrence of this case gives me the opportunity for a more general consideration of appendicostomy, an operation which does not seem to me fully to be appreciated at the present time. The operation, like some other sound surgical methods, was the outcome of pure chance in the course of an operation for cæcotomy by Dr. R. W. Weir[3] of New York in 1902. Before the cæcum had been opened the appendix—with commendable unselfishness on the part of an organ so much vilified—presented itself in such a suggestive manner that it was at once employed to establish the communication with the cæcum. Since that time not more than a dozen cases of the operation have been published, two of which are included in Mr. Keetley's paper, to which I have referred.

For clinical purposes the possibilities of the operation may be considered under four heads. 1. As a means of affording facilities for the treatment of certain conditions of the large bowel and possibly of lesions of the small bowel

[1] The details of the case as well as some elementary matters included in the remarks as delivered are omitted in order to economise space.—W. H. B.

[2] Brit. Med. Jour., Oct. 7th, 1905.

[3] Loc. cit. and New York Medical Record, August 9th, 1902.

in enteric fever. 2. As a means of relieving certain forms of intestinal distension. 3. As a means for the introduction of nourishment into the intestine in certain cases. 4. As a substitute for cæcal colotomy.

1. APPENDICOSTOMY AS A MEANS FOR THE TREATMENT OF CERTAIN CONDITIONS OF THE LARGE AND SMALL INTESTINE.

Certain conditions in this relation suggest themselves at once and are enumerated in the following order in Mr. Keetley's paper, in which they are dealt with so fully that it is unnecessary to occupy any space in considering them here: mucous colitis; dysentery; chronic constipation; ileo-cæcal intussusception; and ulceration of the colon, syphilitic and otherwise.

Dr. Ewart is extremely anxious to utilise this operation for the purpose of obtaining access to the ileum through the ileo-cæcal valve as he thus hopes to be able to apply local treatment to the lesions affecting the distal portion of the ileum in enteric fever. By a sufficient dilatation of the stump of the appendix it is possible to see the ileo-cæcal valve through a small speculum and so to pass a flexible tube through it, but it must not be forgotten that apart from the difficulty of frequently repeating this proceeding, if the point of junction of the appendix with the cæcum is too much dilated the sphincter at that spot as well as the valve of mucous membrane sometimes existing would be destroyed and the great advantage of appendicostomy—viz., *the prevention of regurgitation of the bowel contents through the stump of the appendix—would be annulled*. It seems, however, that the position of the ileo-cæcal valve is fairly constant when the cæcum is moderately distended and it is then possible on the cadaver to introduce with comparative certainty a rigid tube appropriately curved through the ileo-cæcal valve after passing it down the open appendix stump. It is, however, more than doubtful whether this manœuvre is sufficiently easy to make it feasible in ordinary circumstances.[4]

With regard to chronic constipation, for which appendicostomy has been suggested as a means of treatment, there is no doubt that the introduction of appropriate drugs would be easy through a short cut to the large bowel such as this operation provides. At the same time I am compelled to admit that I do not in practice meet with cases of constipation which in the absence of adhesions or organic disease are so intractable as to justify, in my opinion, any of the operations—e.g., ileo-colostomy—which are at present practised in connexion with them. Should such a case, however, come under my treatment I should certainly try appendicostomy before resorting to short-circuiting the ileum and colon, not only as the operation itself is more simple, but also because, unless current reports are misleading, the ultimate results of ileo-colostomy are now found to be by no means so satisfying as we were at first led to expect. In this connexion and in the other conditions for which appendicostomy is considered suitable, it must be admitted that its scope may be considerably limited by the fact that for its proper performance the proximal end of the appendix lumen must be healthy and patent over a length of at least half an inch. Adhesions, however dense, need be no bar to the operation as such, although their existence may convert a very simple proceeding into one of so much difficulty and severity as to negative the propriety of its performance in some cases.[5]

2. APPENDICOSTOMY IN THE TREATMENT OF CERTAIN FORMS OF INTESTINAL DISTENSION.

There is occasionally met with a form of intestinal distension after abdominal operations in very toxic cases and in connexion with some acute diseases—e.g., pneumonia—which drugs seem powerless to affect, the distension being apparently due to toxic paresis. In such cases, unless relief can be given by surgical means, the increasing distension rapidly leads to a fatal issue mainly in consequence of the embarrassment of the lungs and heart. It is a disappointing fact that in such cases the mere opening of the bowel is sometimes followed by little or no relief, the amount of flatus escaping after incision being curiously little. I can recall a case in which the intestine was opened in several places with but very trivial and temporary relief. Indeed, the only really satisfactory cases of the kind in my own experience have been those in which the bowel contents were pumped out by aspiration as the flatus, &c., re-accumulated. With the intestinal wall in the attenuated state which exists in these cases the fixing of the margins of the opening around the pumping tube sufficiently closely for aspiration is not easy; it is, however, obvious that a natural canal like the appendix would be admirably adapted for the purpose, and the next case of the kind with which I meet I shall certainly try pumping out the intestine through a tube fixed in the appendix. A difficulty in this matter, of course, at once suggests itself by the doubt whether in an abdomen thus distended the appendix could be drawn up through the abdominal wall, a matter which, I suppose, would largely depend upon its position; at all events, it might be possible if the distended cæcum were first temporarily emptied by aspiration or by an incision which is immediately closed, for the appendix to be drawn up before re-distension occurs, an attempt certainly justifiable in intractable cases like these in consequence of their gravely lethal tendency. Further, I think it worth considering whether in certain cases of resection of portions of gut and some operations dealing with partly paralysed bowel in which distension may be apprehended, appendicostomy as a safety-valve against subsequent distension may not be desirable. The abdomen having already been opened, the appendix is readily, in the majority of cases, drawn out by means of a pair of dressing forceps introduced through a button-hole in the abdominal wall, fixed and immediately opened, a proceeding which adds nothing to the severity of the original operation. Moreover, the open appendix in addition to being a safety-valve against distension, might be useful for the administration of drugs and, indeed, of nourishment—a point the general aspects of which are interesting.

3. APPENDICOSTOMY AS A MEANS OF ADMINISTERING NOURISHMENT AND AN ALTERNATIVE TO THE RECTUM FOR THAT PURPOSE.

It is a matter of common knowledge that life can be sustained for an indefinite period by nourishment administered by the rectum provided that the necessary amount of nutrient material can be retained by the bowel, and provided that the patient is not the subject of some disease which makes a heavier call upon the powers of resistance than can be met by rectal feeding. At the same time it must be conceded that, apart from the difficulty often met with in the retaintion of a sufficient amount of nutrient material during the course of a protracted case, rectal feeding in itself is not infrequently painful and in sensitive patients repulsive; moreover, the quantity of material introduced is vastly out of proportion to the amount utilised, and further the constant disturbance necessary in patients who are grievously ill often militates seriously against recovery or prolongation of life. It must also be allowed, *ceteris paribus*, that the higher up in the bowel nutriment is introduced the greater is the proportion absorbed for purposes of nourishment.

Assuming these premisses to be correct, it is clear that a given amount of nutrient material passing into the cæcum would have a higher nutritive value than a similar quantity introduced into the rectum and that a still higher nutritive value would be derived if it could be introduced into the small intestine.

As already shown, the operation of appendicostomy in a normal condition of parts about the cæcum is a simple and entirely safe proceeding in the hands of a competent surgeon. It therefore seems to me that in any case in which prolonged rest of the stomach from food is desirable, or in which feeding by the mouth is likely to be permanently or for long periods impracticable, appendicostomy may provide a channel for the administration of nourishment far superior in every respect to that afforded by the rectum; indeed, I am inclined to the opinion that in some cases of malignant disease of the gullet and cardiac region of the stomach it may finally even supplant the operation of gastrostomy by reason of its simplicity and the avoidance of possibility

[4] Since this lecture was delivered further experience shows that the difficulty of introducing an instrument through the ileo-cæcal valve is less than here suggested; indeed, Dr. Ewart tells me that he is now able to effect an entrance into the small intestine with ease and certainty.

[5] In the course of an examination of 100 subjects post mortem at St. George's Hospital in 1880-81 with a view to determining certain points in the anatomy of the cæcum the appendix in two cases was represented by a shrunken fibrous cord and in two other instances the lumen within half an inch of the opening into the cæcum would admit only a small bristle. Excepting in these four cases there was nothing in the series, so far as I can recollect, which would have prevented the performance of appendicostomy.

of the operation area being invaded by disease, as is inevitable in certain instances of gastrostomy for gastric carcinoma. At all events, it is, I am sure, worth consideration from this point of view. Moreover, appendicostomy could be undertaken in patients whose strength had too far gone to enable them to undergo gastrostomy or adequately performed jejunostomy with any hope of survival. At first sight the substitution of appendicostomy for gastrostomy in carcinoma of the stomach seems almost Quixotic but a little consideration will, I believe, make it clear to any impartial mind that the idea is in certain circumstances not unreasonable. Some years ago I had under observation a case of gastric disease of a non-malignant type in which food could not be given by the stomach and could not be retained by the rectum; death followed finally from exhaustion in spite of every ordinary effort to sustain life. I have little doubt that appendicostomy would have afforded a means of giving nourishment which would certainly have prolonged, and might have saved, the patient's life. In this relation I feel convinced that there is a considerable future in discriminating hands for the operation now under discussion.

4. APPENDICOSTOMY AS A SUBSTITUTE FOR CÆCAL COLOTOMY.

Setting aside cæcal colotomy as inappropriate for any of the purposes already discussed, the operation is reduced to a measure which is applicable only in cases of obstruction from organic disease high up in the large bowel which is not susceptible of removal, the scope of appendicostomy as an alternative must therefore be small, as there are very few of such cases which cannot be far better treated by intestinal anastomoses. In any case, however, I am inclined to think that the advantage on the side of appendicostomy is more apparent than real, for although the operation itself may be comparatively easy under normal conditions about the appendix region, the tendency to contraction of the patent appendix, however widely dilated, seems to be more than a set off against the relative severity of the operation of cæcal colotomy; of course, the tendency to a recontraction may be obviated by incision into the bowel on either side of the appendix opening, but if such were made the operation could hardly be called with exactitude merely appendicostomy.

Such, gentlemen, are the main points which suggest themselves to me in connexion with this operation. I am conscious that an apology is due for devoting so much time to matters of which I have as yet comparatively little experience—my excuse must be that the cases suitable for this operation are not likely from the nature of things to occur often enough in the practice of an individual surgeon to enable a rapid experience to be gained. I have therefore thought it not unnatural to submit what seem to me reasonable possibilities for the consideration of others, as the time necessary for adequate experience of the results at the hands of one man would probably defer the formulation of any practical conclusions unnecessarily long. Whatever the ultimate scope of utility of appendicostomy may prove to be, it has already established beyond dispute that an organ which in these latter days has been marked down for somewhat ruthless destruction has, after all, an obvious surgical use.

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The Hunterian Lectures

ON THE

PHYSICAL ANTHROPOLOGY AND ETHNOLOGY OF BRITISH NEW GUINEA.

Delivered before the Royal College of Surgeons of England on Feb. 12th, 14th, and 16th, 1906,

BY CHARLES GABRIEL SELIGMANN, M.B. LOND., M.R.C.P. LOND., F.Z.S.

LECTURE I.

Delivered on Feb. 12th.

[AFTER some introductory remarks Dr. Seligmann said:]

New Guinea stretches in a north-north-westerly and a south-south-easterly direction beyond the eastern Malaysian Islands of Celebes and Gilolo. To its south lies Australia, separated from it by Torres Straits which is but 80 miles across. To the east lies the bulk of Melanesia, which extends to the north of the eastern half of New Guinea almost to the equator. New Guinea itself lies wholly south of the equator; its area is about 300,000 miles; its western half belongs to the Dutch; the remaining half is fairly evenly divided between Great Britain and Germany.

The geological history of New Guinea, so far as it relates to recent post-tertiary elevation or subsidence, becomes important ethnologically when the proximity of New Guinea to Australia is considered. Torres Straits is studded with reefs and islands, so that if any considerable subsidence had recently occurred the possibility of the existence of land communication with Australia would have to be considered. As a matter of fact there is no evidence of any such considerable subsidence in late geological times; on the contrary, it seems clear that throughout the eastern portion of New Guinea a very considerable amount of elevation has taken place in late tertiary or recent times, so that the coastal zone in the central district of British New Guinea has come to consist largely of recent coraline and alluvial formations. The interior of British New Guinea as a whole is composed of a central range of lofty mountains giving rise to less lofty lateral ranges. In the former metamorphic rocks appear to predominate while volcanic rocks occur in the latter.

The New Guinea fauna are of the Australasian type. No mammals other than marsupial, with the exception of the dog and the pig which must be looked upon as introduced, occur; and I may here so far anticipate as to say that, in spite of statements to the contrary, there is no evidence that the natives of Daudai—that part of the New Guinea coast opposite to Cape York—or, indeed, elsewhere in New Guinea, physically resemble the Australian black or show evidence of mixture with any Australian element. With the conditions prevailing in Torres Straits I shall deal later.

Although the boundaries between British, German, and the Netherlands New Guinea are not in any sense natural this inquiry will be limited to the people of British New Guinea, since but very little material from German or Dutch New Guinea is available.

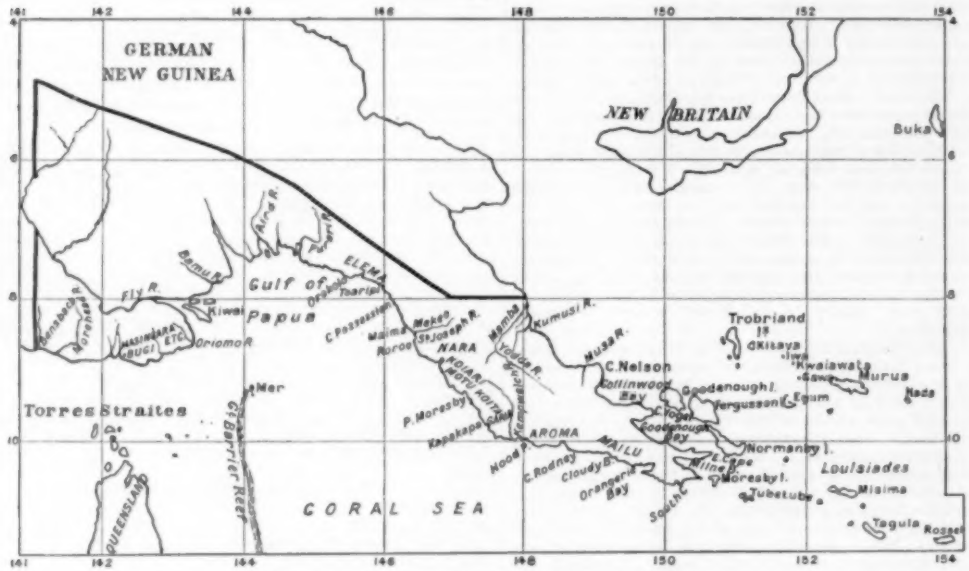
The actual task of differentiation of a people into its proximate elements may be done at sight, or after a slight amount of consideration in the field, or only after a large amount of leisurely comparison and consideration, while the ease with which this analysis is effected will vary according to the extent to which it is carried and the complexity of the problem investigated. Where the difference between two groups is so great as to suggest itself in some particular at sight and to be confirmed in other details as observation proceeds, the differentiation of these groups is usually perfectly sound, and the classification adopted may be of great and far-reaching importance. As an example of differentiation at sight confirmed by subsequent experience which has stood the test of time, Wallace's wonderfully faithful description of the points of difference between the Malay and Western Papuan may be mentioned. The description given by Wallace, a summary of which I quote, will ever remain a model to anthropologists, summarising

and contrasting as it does the chief physical and mental characteristics of the two races:—

> It appears, therefore, that, whether we consider their physical conformation, their moral characteristics, or their intellectual capacities, the Malay and Papuan races offer remarkable differences and striking contrasts. The Malay is of short stature, brown-skinned, straight-haired, beardless, and smooth bodied. The Papuan is taller, is black-skinned, frizzly-haired, bearded, and hairy-bodied. The former is broad-faced, has a small nose and flat eyebrows; the latter is long-faced, has a large and prominent nose, and projecting eyebrows. The Malay is bashful, cold, undemonstrative, and quiet; the Papuan is bold, impetuous, excitable, and noisy. The former is grave and seldom laughs; the latter is joyous and laughter-loving—the one conceals his emotions, the other displays them.[1]

From this quotation it is clear that the factors upon which Wallace depended to differentiate Papuan and Malay were physical and cultural, using the latter in a somewhat broad way to express not only technical differences in the arts and crafts but the underlying psychical peculiarities which have largely determined these divergences. Besides these there is a third criterion—namely, language, which when not too enthusiastically used may prove a useful guide. The nomenclature to be adopted must now be defined. I follow Keane in believing that the term "Papuan," which has hitherto been used to describe the inhabitants of New Guinea generally, is unsuitable for this purpose, since even in British New Guinea there are groups of folk so little alike that they may be considered to be racially distinct.[2] This was first pointed out by Haddon who recognised "a Melanesian migration into New Guinea," and further, "that a single wandering would not account for certain puzzling facts."[3] If a word equivalent to an inhabitant of New Guinea be required the term "Papuasian" might be employed; in any case the term "Papuan," unless qualified, should be limited to the geographically more western Papuasian, that frizzly-haired and often mop-headed race, with a skin colour varying from dark chocolate brown to blackish, recognised and described by Wallace as the typical Papuan. The eastern Papuasians—that is, the generally smaller, lighter coloured, frizzly-haired race of the eastern New Guinea Archipelagoes and the eastern peninsula of New Guinea—now require a name, and since the true Melanesian element is dominant in them they may be called Papuo-Melanesians. But within these groups, wide as they are, no room has been found for the great bulk of inland folk who, as far as our present knowledge extends, everywhere inhabit the predominantly mountainous country of the interior eastwards from the neighbourhood of the parallel of 150° E. longitude to the German boundary. These people, if they be considered in the broadest terms, are characterised by a stature shorter and a less heavy and bulky physique than the majority of the true or western Papuans. In this they resemble the Papuo-Melanesians, from whom they are differentiated by their more Papuan features, by the fact that they usually speak Papuan languages, as well as by a host of cultural characteristics. The question of the position of these folk hitherto regarded as Papuan is one of extreme difficulty. They might perhaps be regarded as the result of the admixture of the incoming Melanesian wave, spreading from the south-eastern peninsula of New Guinea, with a previously existing Papuan element, but in addition to considerations based on cultural characteristics the prevailing mesocephaly of the folk under discussion seems to me against this view. Personally I am inclined to consider them fundamentally Papuan but profoundly modified by the influence of that immigrant stock which I shall later show exists on the southern coast of British New Guinea. And since whatever be their origin it is necessary to describe these folk, and for this purpose a general name is necessary, I propose to call them Eastern Papuans, because this prejudices their origin as little as may be while emphasising their geographical position, which, broadly speaking, is to the east of the true Papuan territory. These, then, with an immigrant folk on the southern coast, to be described later, constitute, as far as we know them at present, the races of British New Guinea.

FIG. 1.



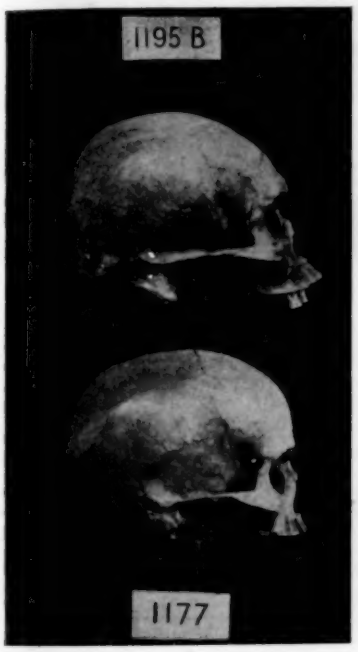
Map showing boundaries of British and German New Guinea.

I may now allude to some of the more marked differences between the Papuan and the Papuo-Melanesian. Physically the Papuan is usually taller and is often more dolichocephalic than the Papuo-Melanesian; he is always darker, his usual colour being a dark chocolate or sooty-brown; his head is high and his face is, as a rule, long with prominent brow-ridges, above which his rather flat forehead usually slopes backwards. The Papuo-Melanesian head is usually less high and the brow ridges are less prominent, while the forehead is commonly rounded and not retreating. The difference in cranial form is well seen in the two skulls reproduced in Fig. 2. The Papuan skull, No. 1195 B, is that of a man of the Western tribe of Torres Straits, whose retreating forehead may in part have been produced by manipulation during infancy. The Papuan nose is longer and stouter and is often so arched as to present the outline known as "Jewish." The character of its bridge varies, but typically

[1] The Malay Archipelago, 1894, p. 450.
[2] Ethnology, 1901, p. 282.
[3] The Decorative Art of British New Guinea, 1894, p. 267.

e nostrils are broad and the tip of the nose is often hooked wnwards. In the Papuo-Melanesian the nose is, as a rule, maller and the truly Papuan type of hook does not, as far s my observation extends, occur. Both races have frizzly air and though prognathous and full-lipped they appear ess so than does the African negro. Fig. 3, the photograph f a man from the Aird river delta, shows features which re fairly typical of the Papuan. All the Papuo-Melanesian roups speak languages built on the common model of Melanesian grammar and, so far as our knowledge goes, re divisible into groups, the constituent languages of ch of which contain numbers of common words, all lated to the common stock language of Oceania. ith the Papuan languages it is otherwise; quâ vocabu-ry, they present a number of apparently unrelated

FIG. 2.



Papuan (1195 B) and Papuo-Melanesian (1177) skulls.

ock languages, while of their grammar it can only e said that while a number of them conform to rtain rules it is clear that the grammar of none of them esents Melanesian characters. A great difference is also esent in the system of enumeration of the two races. hile the Papuo-Melanesian counts easily by the quinary, cimal or vigesimal system the Papuan has only two merals, one and two, and counts with certainty only up to e by combining these. An exception is, however, to be ted: certain, if not all, of the Binandere-speaking tribes ve numerals up to three and by using their fingers can ake shift to count to ten. While artistically considered e finest Papuan carving is far from mean the Papuans ve not obtained the skill of the Massim Papuo-Melanesians. n the other hand, the large Gulf club-houses are superior any other buildings in British New Guinea, while the lf Papuan alone, as far as our present knowledge goes, s evolved a definite religious system in which depart-ental deities play a well-marked part. Along the southern ast line the area in which true Papuans occur is om Cape Possession westwards to beyond the Anglo therlands boundary; upon the north coast Papuans are und from the Anglo-German eastwards as far as Collingwood y and are known to extend up the valleys of the Mamba, pi, Musa, and Kumusi rivers. The Papuo Melanesians habit the south-eastern peninsula and archipelagoes and extend westwards along the northern coast as far as Collingwood Bay. Upon the southern coast they reach only as far as Mullins Harbour. In the central district and generally speaking in the mountainous country inland the natives belong to the Eastern Papuan group, while the southern coast line from Aroma to Cape Possession is colonised by an immigrant stock which I term "Motuoid," deriving this term from the name of their best known tribe, the Motu.

In New Guinea, where a traveller will often meet with a different dialect, or even perhaps a language, every 20 or 30 miles he travels, and where neighbouring folk belonging to the same race may present divergences, it is necessary to have some general term for people presenting similar or allied physical characters though perhaps speaking different dialects or possibly even languages and varying to a greater or less degree in culture. To such a collection I apply the term "ethnic group." In the present stage of our knowledge it is often convenient to unite temporarily two or more such ethnic groups on account of their similarity in some cultural or physical characteristic. To such often purely artificial approximations I apply the term "stock" or "congeries," or where, as is often the case, the ethnic groups under consideration occupy an easily defined geographical area they are connoted by the area which they inhabit. In British New Guinea tribes are usually small and several may be contained in a single ethnic group and I have not hesitated when convenient to call an ethnic group by the name of one of its best-known constituent tribes.

WESTERN OR TRUE PAPUANS.

The Papuan Gulf lies to the west of Cape Possession and "Gulf district" is the usually recognised term for the greater part of its shore. In a strict geographical sense it would seem that the eastern shore of the Fly river should form the western boundary of the Gulf. But custom and convenience are both against this use; the vast delta of the Fly has always been considered as a separate province and it becomes necessary to fix some more or less arbitrary western boundary to the Gulf district. It is obviously convenient that this boundary, since it is geographically unreal, should, as far as possible, mark the eastward limit of the culture characteristic of the Fly district, and in the present state of our knowledge a line somewhat west of the Bamu river would appear to fulfil this condition. Remembering then that the western limit of the Gulf district is geographically unreal and may later prove to be ethnographically unsound, the Gulf when spoken of here will be held to include the coast line stretching from Cape Possession (Waimatuma) in the east to the western side of the Bamu estuary in the west. So defined, the mouth of the Purari river forms roughly the centre of the Gulf district, and since the Koriki tribes, the most homogeneous Gulf people with which we are yet acquainted, cluster round the mouth of the Purari it becomes convenient to take the neighbourhood of this river as a starting point in describing the Gulf population. The district around the mouth of the Purari has been called "Namau," but since this term is geographical and embraces an indefinitely large area stretching westward I avoid using this term for folk inhabiting the Purari delta, and following the rule of nomenclature already alluded to call these folk the Koriki group. So defined, the Koriki form one of the most homogeneous folk in British New Guinea. Owing to their inveterate head-hunting propensities many of their skulls have come to Europe and many museums possess specimens which have been carefully measured and described, so that mention need only be made of the papers by Sir William Turner[4] and Mr. George A. Dorsey.[5] But until recently it has not been clear from which part of New Guinea these skulls were derived, though the community of style and often identity of pattern of the designs incised or scratched on the frontal bone made it obvious that all the skulls belonged to one group. Specimens Nos. 1201 C—1201 L of the College of Surgeons collection are from the Purari delta and exhibit the usual cranial and decorative characters of such skulls. For the following account of the origin of the carvings on the frontal bone I am indebted to the Rev. J. H. Holmes. This information makes clear that the skulls are those of enemies, a point upon which previously

[4] Decorated and Sculptured Skulls from New Guinea: Proceedings of the Royal Society of Edinburgh, vol. xxii.

[5] Observations on a Collection of Papuan Crania: Field Columbia Museum Publications, Anthrop. Series, vol. ii.

the greatest uncertainty has prevailed. Mr. Holmes's information is substantially as follows. A man who kills an enemy receives the latter's skull at the cannibal feast at which the body is eaten; he keeps the skull until he becomes too old or infirm to join in further warfare; when this time arrives he and other old men of his generation carve the skulls which they have meanwhile kept in their club-house, each individual carving that design on the forehead of his skulls which is peculiar to his own family, or more probably clan. This carving is generally done while the younger men of the tribe are away on the war-path; if when they return it is found that they have been successful the skulls are put away, but if success has not attended the younger men then the old men make it known by a chanting and a beating of drums that they are about to make a presentation of skulls to the young warriors. The latter at once set to work to prepare a feast for the old men. At a given stage in the feast the old men present the skulls to the warriors, assuring them that in future they will be braver and consequently more successful than formerly, as they will have to help them the bravery of the individual whose skull they now receive. It is alleged that a similar custom is observed by the non-cannibal Elema tribes to the east of the Purari, but here for the human skull is substituted the skull, lower jaw, or tusk of the wild boar.

Since the most important characters are substantially similar or present in the main a similar range of variation in the series of Koriki skulls described by various authors it will be enough to quote the indices of the skulls in the College collections with the warning that the average cephalic index is rendered lower than in other collections (68 as against 72 in Dorsey's collection) by the presence of a single skull with the specially low index of 62·6. Generally

FIG. 3.

A man of Goaribari, Aird river delta.

speaking, the skulls are markedly dolichocephalic and prognathous, micro- or meso-cephalic, and mesorhine. These characters agree pretty closely with those calculated from measurements on the living (22) made by Dr. W. M. Strong (CI. 72, N.I. 83), though both in crania and the living there are considerable individual variations from the average. The average male height is just under 1600 millimetres (63 inches), the hair is always frizzly, and the skin is rather dark. These Purari folk are variously estimated to number from 10,000 to 40,000 and are divided up into a number of tribes, of which the Koriki and Iari are the best known. Their language is different from those Kiwai dialects spoken in the riverine district of the Gulf and is also unlike that of the Elema tribe to the east. Their villages are large and a single village—namely, Maipua—has been estimated to contain as many as 2000 or 3000 inhabitants. There is almost continual fighting between the Purari delta tribes, since besides skull-collecting the custom of vendetta prevails.

FIG. 4.

Men of Masingara tribe, Daudai.

That portion of the Gulf east of the Purari delta is as a whole characterised by the taller stature of its inhabitants and their higher cephalic index. This area includes the people of Orokolo, Toaripi, Jokea, and Lese. Probably these belong essentially to one group, generally known as Elema. In all of them the average cephalic index is 77, while their average height varies from 1667 millimetres (65¾ inches) for Jokea and Lese at the eastern extremity of the Gulf to 1702 millimetres (67 inches) for Toaripi and 1636 millimetres (66 inches) for Orokolo. 12 Orokolo men measured by the Rev. J. H. Holmes, however, gave the high average of 67½ inches and varied from 63 to 71 inches, the latter an enormous height for a Papuan.

In spite of the apparent homogeneity in certain respects of the folk in this district the character of the nose varies greatly, presenting two well-marked types of broad and comparatively short and long narrow nose in individuals of the same group, and I believe this variation in an extreme form occurs even in the same village. Unfortunately, I have but few nasal measurements from this area but in five men the nasal index varied from 70 to 93.

West of the Purari for some miles stretches an area of mud and swamp constituting the deltas of a number of big rivers and smaller streams. Going eastward from the Purari the chief of these rivers are the Kapaina, the Kikori, the Omate (Aird river), the Turama, and the Bamu. For convenience this area may be called the riverine portion of the Gulf. Of the inhabitants of this area but little is known and that little is limited to the mouth of the Aird river and the country west of it. The culture of the western moiety of the riverine area presents affinities with both that of the Fly and the eastern half of the Gulf.

Physically all that is known is that on the island of Goaribari at the mouth of the Aird river there exists a highly brachycephalic population which perhaps extends to the Turama river. The cephalic index of five Goaribari men gave the high average of 87, while six skulls from the Aird river delta gave an average of just over 80 and varied only between 80 and 81·5. The average height of the five Goaribari men was 1611 millimetres, or about 63½ inches. Passing westwards to the Bamu the cephalic index of eight men varied from 72 to 78, with an average of 76, while two male crania gave an average index of 75·6. Thus the folk at the mouth of the Bamu are just mesocephalic, contrasting strongly with the highly brachycephalic natives of Aird river. Although at the mouth of the Fly river

there is also a strong dolichocephalic element, the brachycephals again crop up and appear to have spread into Torres Straits where mesocephaly and brachycephaly are common in the western tribe, though the former is scarce and the latter is absent in the more isolated eastern tribe. D'Albertis found that the brachycephalic element occurred at Canoe Island and Kiwai in the upper and lower reaches of the Fly delta respectively. Above this—i.e., in the interior of the Fly river district—the 13 male and seven female skulls which he collected varied from 67·7 to 77·1, but the pickled head brought back by him had a cephalic index of 84. Living in the bush west of the Fly are the Masingara, the most homogeneous group of dolichocephals yet met with in New Guinea. The cephalic index of these folk (11 males) varies from 68 to 74 with an average of 71: they are of moderate height, 1616 millimetres (63½ inches), and have invariably frizzly hair. The skulls of individuals of bush tribes in this neighbourhood collected by D'Albertis and Haddon are dominantly dolichocephalic, while along the coast as far west as Mawatta at the mouth of the Pahoturi river opposite Saibai, the brachycephalic stock found in the Fly delta is represented—e.g., skulls from the Oriomo river are highly mesaticephalic or brachycephalic. These somewhat puzzling relationships become clear in the following table. I have taken the Torres Straits measurements from Haddon's paper in the *Geographical Journal* for 1900.

Cephalic Index.	Living subject.	Skulls.					
						Torres Straits.	
	Masingara. Males.	Bush tribes, Daniel. Male and female.	Kawai. Male and female.	Canoe Islands. Male and female.	Fly river interior. Male and female.	Western tribe. Male and female.	Eastern tribe. Male and female.
–75·9	11	12	2	—	19	41 (64%)	29 (88%)
76-79·9	—	4	6	1	2	12 (19%)	4 (12%)
80 +	—	—	4	3	—	11 (17%)	—
Totals.	11	16	12	4	21	64	33

To study the physical characteristics of the natives of the country west of the Fly district was one of the main objects of the Daniels expedition, since it had become important to determine whether the reiterated assertion that in British New Guinea near the Dutch boundary there were natives resembling Australians was true or not. I can definitely state that 42 natives carefully examined physically and measured do not show any Australian characteristics and the same holds for the much larger number of natives seen, with the single exception that one partially bald old man seen at Bugi momentarily recalled one of the Arunta figured by Mr. Spencer and Mr. Gillen. The folk examined at Bugi consisted of the shattered remains of a number of tribes from Bugi and Strachan Island who had escaped death at the hands of Tugeri raiders from over the Dutch border. Further west—i.e., actually on the Anglo-Dutch boundary and three days up the Bensbach river—the Toro tribe was met with and its members studied. There is a slight amount of brachycephaly in both folk; ignoring this the Bugi may be said to be predominantly mesaticephalic, the Toro to be dolichocephalic. The latter are considerably taller (1691 millimetres—i.e., 66½ inches) than the Bugi group (1640 millimetres—i.e., 64½ inches). In both folk there was considerable variation in stature and feature. The Toro are spare and moderately tall, with thin legs and often thin bony faces, projecting zygomata and marked supra-orbital ridges. Facially they seem to vary more than other western tribes, some of them closely resembling examples of the less intelligent types of European faces. The hair of all is frizzly and the nostrils are generally bored, in some cases in two places. In many these holes have become very small so that the plugs that some of the men wear are evidently not considered important articles of toilet. Their noses are generally long and coarse, with moderately broad bridges, and often with coarse fleshy tips which are never hooked. Generally speaking, the Toro appear long-faced. In some of the older men the front teeth have gone, in others the fangs are exposed by receding gums, but in every case their teeth are white and no sign of betel chewing is seen, nor are any lime gourds noted. One of their favourite attitudes is to stand on one leg, the sole of the foot of the other being

FIG. 5.

A man of the Toro tribe, Bensbach river.

applied just above the knee of the leg which supports the weight of the body; in fact, they assume the attitude figured by Grogan for the Dinkas of the Nile swamps.

LECTURE II.

Delivered on Feb. 14th.

MR. PRESIDENT AND GENTLEMEN,—For the following information which concerns the Papuan inhabitants of the northern portion of British New Guinea I am largely indebted to Mr. C. A. W. Monckton, the resident magistrate for the northern division, and to Mr. E. L. Giblin. The former has kindly identified the villages of the folk, measured and classified them according to their geographical position, our measurements having been taken from such prisoners and members of the armed native constabulary as the expedition came in contact with. I am also indebted, though to a less extent, to Captain Barton.

First, considering the coast line from the German boundary to Porlock Bay to the west of Cape Nelson, the country is inhabited by a people typically represented by the inhabitants of the lower Mamba river, all speaking dialects of a common language called by Mr. Monckton 'Binandere." As a matter of convenience I propose to extend this name so as to include the many tribes of the folk speaking these dialects. Physically, the Binandere are a particularly sturdy set of people. (Fig. 6.) The average of 14 men measured haphazard from villages scattered all over their country was 1658 millimetres (nearly 65¼ inches). Only one man fell below 1600 millimetres (63 inches), while four were over 1700 millimetres (nearly 67 inches), the tallest being 1740 millimetres (over 68½ inches). They are predominantly mesaticephalic, with a tendency to brachycephaly (average 78). In general appearance they rather recall some of the Elema natives of the Papuan Gulf, but the comparatively delicate nose found in some Gulf men does not as far as my observation goes occur among the Binandere. I have been able to gather little about their customs or beliefs, but they are probably not totemic and quite obviously are less afraid of the dark and supernatural agencies than most other Papuasians. Their dances are elaborately pantomimic and are more energetic than I have seen performed by natives of other parts of British New Guinea. Mr. Giblin tells me that each village possesses, or should possess, a dancing house, inside which dancing takes place nearly every evening. They are frankly cannibal and distinctly warlike and are the only people who have ever attempted to combine in any number against the

Government. Mr. Monckton informs me that the Binandere have been gradually pressing eastwards along the coast and that originally they came from across the German border.

The system of enumeration made use of by some at least, if not by all, of the Binandere is different from that of the Papuans of the southern coast whose extremely limited command of numerals has already been referred to. The Binandere have numbers up to three and then count up to 10 on the fingers—e.g., the number 4 is signified by describing the hand with four digits flexed and the little finger (for which they have a separate term) extended, 6 by the thumb of the second hand, and 10 by words signifying "hands two."

On the mountainous mass which constitutes the Cape Nelson peninsula are three tribes—the Okena, Mokuru, and Korafi. All are Binandere-speaking tribes, but, according to Mr. Monckton, the Korafi are at enmity with their

FIG. 6.

A Binandere man.

western neighbours and really consist of the representatives of a number of broken tribes shattered by the pressure of other Binandere-speaking tribes moving east, of whom the Okena were the foremost until they were checked by the Korafi confederation shortly before this region came under Government influence. A portion of the coast line between Mokuru and Korafi—i.e., between McLaren Harbour and Port Hennessey—is inhabited by the Arifama who, Mr. Giblin states, speak a Melanesian language and are lighter skinned than their neighbours and who are at any rate provisionally to be regarded as the most western representatives of the Papuo-Melanesian race. The Arifama, according to Mr. Monckton, united with the Korafi in repelling the onset of the Okena and their kindred tribes. The valleys of the Mamba, Musa, and the lower Kumusi river are inhabited by Binandere-speaking tribes. The inhabitants of the Opi and Yodda valleys and the slopes of Mount Lamington, according to Mr. Monckton, resemble those of the Mamba and speak Binandere dialects but are somewhat lighter in colour. This Opi-Yodda group resembles the Binandere in being rather tall; the average of six men was 1672 millimetres (65¾ inches) while the average cephalic index of seven men with a minimum of 70 and a maximum of 82 was 72. Probably this index is unduly low, being calculated on measurements from too few subjects from villages scattered over too wide an area. I may refer here to a skull collected by Captain Barton at Kokoda, 13 miles E.S.E. of Mount Victoria in the Yodda Valley—i.e., south of the Yodda river—with a cephalic index of 77. The general appearance of this skull, judged by such characters as the prominence of its muscular impressions and development of its supra-orbital ridges, agrees so well with that of skulls belonging to that large group which I have called the Eastern Papuan that we may regard it as derived from an individual of this group and provisionally consider the northern slopes of the main range as the southern boundary of the Opi-Yodda, Binandere-speaking group.

EASTERN PAPUANS.

East of the Cape Nelson peninsula tribes speaking Papuan dialects occur, but according to Mr. Giblin they do not reach the coast again in an easterly direction for some 30 miles where a tribe which he calls Pem appears some 20 miles west of Cape Vogel. Inland of this tribe other Papuan-speaking tribes extend in the mountains as far eastwards as roughly say the parallel of 150° E. longitude but along the coast Papuo-Melanesians folk speaking Melanesian dialects are found. The Papuan tribes east of Cape Nelson, it is generally agreed, have not the tall stature and notable physique of the Binandere-speaking tribes nor does their language resemble those of the Binandere stock. Probably they are to be regarded as related to the Mailu and Domara of the south coast and, like them, are members of the Eastern Papuan congeries who speak Papuan dialects. In the main range and its higher lateral ranges tribes speaking Papuan dialects extend westwards from Mount Suckling wherever west of this the mountains have been explored. That some of these mountain tribes have to some extent been influenced physically by contact with Papuo-Melanesian or immigrant Motuoid tribes seems likely enough and such influence, I believe, may usefully be taken into account when considering the physical characters met with in these tribes. Mr. Giblin believes that one of these tribes, the Dimadima, between Mount Simpson and Mount Thomson on the northern slopes of the main range, has intermarried considerably with Papuo-Melanesians, while I have myself collected wavy hair from the head of an adult of the Lakumi tribe living among the hills of the upper reaches of the Hunter and Musgrove rivers, affluents of the Kemp Welch (Vanigela), who speak a dialect of Garia, a stock Papuan language. Reference will be made later to the Sinaugolo who speak a dialect belonging to the Motu group of Melanesian languages in whom there is tolerably clear evidence of the existence of a Papuan strain.

The Mailu inhabit the country around Port Glasgow and Milport Harbour. They are a predominantly mesaticephalic folk with an average cranial index of 78·6 and a medium stature of 1600 millimetres (about 63 inches). Their skin colour is generally a moderately light *café-au-lait* and their hair is sometimes curly rather than frizzly. Although speaking a Papuan dialect their appearance strongly suggests admixture with some other stock. Orangerie Bay, to the east of the Mailu, is very little known. Captain Barton tells me that the folk are physically Melanesian rather than Papuan. This is borne out by the measurements of four Bonabona men, said to come from Orangerie Bay, where, according to Mr. Giblin, a Melanesian dialect is spoken. These men resemble the Mailu though they are more brachycephalic. On the other hand, a dolichocephalic element probably exists here since in the College collection is a skull (No. 1201 B) with a cephalic index of 70·5.

East of Baxter Bay lies Cloudy Bay. The natives a few miles inland are said to resemble those on the coast. The latter I have not seen but the former are shorter, darker, and less round-headed than the Mailu men further east. They are also said to be fiercer and less amenable to Government influence. The average cephalic index of eight men was 78 (minimum 71, maximum 83). A single skull from Domara, some 20 miles further east, described by Sir W. Turner, has an index of 69.[6] East of Cape Rodney the coast is occupied by non-Papuan folk who yet present many characteristics differentiating them from the eastern Massim. Various groups of these folk all speaking Melanesian dialects inhabit the coast as far west as Cape Possession—i.e., for a distance of some 150 miles. Over this extent of country Eastern Papuan tribes are found in the hills inland and in some instances have, within historic memory, forced their way towards the coast. Two almost certainly originally Eastern Papuan tribes actually inhabit the coast in the present day, but in both cases they have intermarried with

[6] Challenger Report, Part xxix., 1884, p. 89.

the Melanesian-speaking coastal folk and have partially or entirely adopted a Melanesian dialect. Ignoring these for the present, measurements on the living show that the mountain folk of the Rigo and Port Moresby districts are predominantly mesaticephalic with a tendency to brachycephaly. The chief ethnic groups speaking Papuan languages with which we are acquainted in this region are the Garia and the Koiari, the former constituting a fairly homogeneous group, while Koiari is a term applied by the Motu and Koita coast tribes to the bush tribes living in the hills behind the coastal zone. Nevertheless, these bush tribes appear to have so much in common that it may later prove that the tribes classed as belonging to the Koiari group do, in fact, constitute a tolerably homogeneous whole. In the mountains behind the Koiari men of much the same build and height are met with, speaking, according to Captain Barton, dialects akin to Koiari but distinguished in their native mountains from these by the sporran-like garment worn by the men. Four of these mountaineers, measured by Haddon, had an average cephalic index of 81 (minimum 78, maximum 83) and an average stature of 1613 millimetres (63½ inches).

The Garia dialects—for I am told that there are at least two forms of a stock language spoken by different sections of the Garia—are spoken over a considerable area to the west of the Kemp Welch river which constitutes their eastern boundary. Their headquarters may be regarded as the Government Loch Range whence they have spread in a westerly direction towards the coast, their most easterly tribe, the Manukoro, being in contact with the coastal folk behind Kaile. 20 men of the eastern branch of the Garia inhabiting the western bank of the Kemp Welch gave an average cephalic index of 77 (minimum 72, maximum 86) and are very decidedly predominantly mesaticephalic. Four skulls collected by myself from the bush in the immediate neighbourhood of the Garia village of Gosoro are, however, all brachycephalic with an average cephalic index of 81·2, a discrepancy for which I can suggest no explanation. The average stature of 20 men is 1603 millimetres and their general appearance suggests that there may be a considerable infusion of non-Papuan blood in the group. This idea especially receives support from the character of their nose, the root of which is often moderately high and the tip seldom hooked, as well as from the fact that their hair may be occasionally curly and even wavy. In this and other respects they resemble their neighbours the Sinangolo, in whom these characters are accentuated and who speak a Melanesian language. (Fig. 7.)

FIG. 7.

A man of the Ikoro section of the Sinangolo.

Of the folk speaking the western Garia dialect, which may be called Manukoro, since it is spoken by that tribe, I have seen and measured only five men belonging to the Lakumi tribe inhabiting the upper reaches of the Hunter and Musgrove rivers. As far as this limited number goes, they seem to be rather taller and more dolichocephalic than the eastern Garia and one of them had faintly curly hair which was almost wavy. Behind the Garia and rather to their east in the mountains between Mount Potter and Mount Obree are found a folk speaking a language called Baraï. Six men from the village of Seramine [7] were mesaticephalic, with an average cephalic index of 77 and a stature of 1578 millimetres (62 inches).

Koiari is the general term applied to the group of mountaineers living to the east of the Garia group and extending through the country behind Port Moresby. Like the Garia or Barai-speaking folk, measurements on the living show that they are mesocephals with an average stature of 1582 millimetres (rather under 63 inches). (Fig. 8.)

FIG. 8.

A Koiari man

there is a curious discrepancy between the cranial index calculated from measurements taken on the living and from skulls. Whereas the former (ten in number) average 78 and show a minimum of 73 and a maximum of 83, the average cephalic index of seven Koiari skulls collected in the neighbourhood of Port Moresby is 70, with a minimum of 67 and a maximum of 73. The crania in question include three skulls collected by the Daniels Expedition on the road to Wariratta. But it must be remembered that most, if not all, these skulls have been collected within 20 miles of Port Moresby, while some of the living subjects measured certainly come from further inland, whence no skulls have been collected if we except the single Kokoda skull already referred to with a cephalic index of 77 collected by Captain Barton from the neighbourhood of Mount Victoria which may, it appears to me, be attached to this group.

Passing eastwards in the mountains and keeping roughly parallel with the coast, information is lacking until the mountains behind Mekeo are reached. Here are found two physically similar groups, the Kuni and Kamaweka, who speak two perfectly distinct languages, the Kuni a Melanesian and the Kamaweka a Papuan language. Both are predominantly mesocephalic (average 78) though brachycephals occur in both groups, and both are short, averaging 1542 millimetres (60½ inches) and 1487 millimetres (58½ inches). The latter is the average given by 11 Kamaweka, the extremes being 1378 millimetres and 1625 millimetres, only one man exceeding 1575 millimetres (62 inches). The Kamaweka are distinctly darker skinned than the folk inhabiting the broad

[7] Not to be confused with Seramina in the mountains in the vicinity of the "Gap" behind Port Moresby.

plain of the Angabunga and the coastal regions, while, unlike these, as far as my limited experience goes, they have invariably frizzly hair. While the men of both groups wear the ordinary perineal bandage which in New Guinea is spread over so wide an area, their women, instead of the equally common petticoat, wear only a perineal bandage similar to that of the men but without the long pendant behind, commonly worn by men. The average of four male crania collected from the club-house at Inauvorene, a Kamaweka village, is 77, the extremes being 74 and 80, thus agreeing closely with the cephalic index of the living Kamaweka.

PAPUO-MELANESIANS.

The general characteristics of the south-eastern Papuo-Melanesian have already been alluded to, but I may remind you that typically he is short and lightly built, of a *café-au-lait* to bronze colour, and although wavy hair occurs this is rare. Sociologically the group is characterised by the possession of a well-developed system of totemism with descent in the female line of property and totems—in fact, by being still in the mother-right stage. Cannibalism, except where it has been stopped by Government influence, is rife throughout the district and is here especially interesting because, although human flesh was "sweeter" even than pig, the social restrictions as to those whom a given clan might invite to eat human flesh were as strict as, and in fact complementary to, their marriage restrictions. The marriage restrictions approach nearer to the Australian type than any other known in New Guinea, in Milne Bay there being a dual grouping of the clans with the usual phratry exogamy. On the cultural side this people excel in wood-carving, while in the Marshall Bennet group and the Woodlarks large sea-going built-up canoes, 50 feet long, are built.

Broadly speaking, the Massim Papuo-Melanesian is dolichocephalic with a tendency to mesaticephaly which becomes especially obvious in measurements taken on the living. As far as our present knowledge extends, a varying number of brachycephals occur everywhere throughout this area, though the proportion of brachycephals may be locally very small. Here and there individuals with wavy or curly hair occur, though these are far from common, except in the Trobriands and Marshall Bennet group. The inhabitants of the d'Entrecasteaux group composed of the three big islands of Goodenough, Fergusson, and Normanby appear to be the most dolichocephalic of the south-eastern folk. Sergi has examined 118 skulls collected by Loria from Dawson Straits—i.e., presumably the villages fringing the straits between Fergusson and Goodenough. Of 118 skulls of both sexes 93 (78·8 per cent.) are dolichocephalic, 22 (18·6 per cent.) are mesocephalic, and only three (2·6 per cent.) brachycephalic. Considering the difference in numbers this proportion agrees pretty well with the figures given by a series of 34 skulls measured by Dr. Duckworth with an average cephalic index of 73 collected by the Daniels expedition from a cave at Awaiama in Chads Bay. This cave was said to be the depository of skulls brought over from Goodenough or Fergusson, though it is just possible, although very unlikely, that the skulls are, in fact, those of the inhabitants of Chad's Bay or the coastal Taupota villages just east of it. 31 of these skulls (91 per cent.) are dolichocephalic and three (9 per cent.) are mesaticephalic. The average cephalic index of eight Goodenough natives is 75, so that if the two units usually deducted from living cephalic indices to make them comparable with skull indices be subtracted here the living and skull averages give identical figures. With the average cephalic indices of 77 and 76 respectively of the Fergusson and Normanby men, the correspondence, though not so close, is sufficiently striking. These d'Entrecasteaux natives were the shortest we met in New Guinea. Two out of 11 Fergusson men measured were under 1470 millimetres—i.e., considerably under 58 inches—while the average of the whole 11 men was 1530 millimetres (about 60¼ inches). While the average stature of five Normanby natives was only 1547 millimetres (under 61 inches) seven Goodenough natives were taller, averaging 1588 millimetres (about 62½ inches). (Fig. 9.)

The coastal and bush folk of Bartle Bay in Goodenough Bay present as a rule very much the same appearance and physical characters as the Goodenough or Normanby men, but, as far as the small number examined went, tended more to mesaticephaly, while rare individuals among them had altogether finer features, recalling a type by no means uncommon on the Marshall Bennet group.

On the mainland, although dolichocephaly is predominant, mesaticephaly, and even brachycephaly, are not rare. Wagawaga lies almost at the head of Milne Bay. Of ten Wagawaga men measured with an average cephalic index of 74, one was brachycephalic. Similarly, of ten skulls from Milne Bay giving an average cephalic index of 73, nine are dolichocephalic and one brachycephalic, with an index of 82. Much the same condition of things appears to prevail in the neighbourhood of East Cape, where five skulls from Lydia Island, including one brachycephal, gave an average index of 74. Practically nothing is known concerning the folk in the mountains behind Milne Bay, but of the only two men from Buhutu (which appears to be a general name for that mountainous country) seen and measured, one was

FIG. 9.

A Papuo-Melanesian from Goodenough Bay.

dolichocephalic and the other a brachycephal. Brachycephaly is also met with in the neighbourhood of South Cape, where the average of seven skulls had risen to 76 (minimum 71, maximum 81), while the only man measured from this neighbourhood had a cephalic index of 84.

The inhabitants of Tubetube in the Engineer group, situated about halfway between Milne Bay and the Louisiades, allege that they originally came from the eastern end of Duau (Normanby), whose inhabitants in a general way they resemble. The average cephalic index of ten natives measured was 74 (extremes 71 and 75) and their average stature 1555 millimetres (61 inches).

Passing east beyond the Engineer group, in which is situated Tubetube, to the Louisiades there appears to be a general rise in the cephalic index of the living. The average of nine men, only one of whom was dolichocephalic while three were brachycephalic, was 79. This raising of the index is not so clear in the few skulls accessible, but occurs nevertheless, since of six skulls from this group in the British Museum giving an average cephalic index of 74 (minimum 69, maximum 77), four skulls are dolicho- and two mesati-cephalic.

I can unfortunately give no measurements of the inhabitants of Yela, Rossel Island, the most easterly island of the Louisiades. Mr. Ray informs me that their language shows no trace of Melanesian.

Papuo-Melanesian tribes extend westward of Bartle Bay along the coast as far as the northerly side of the base of the Cape Vogel peninsula. Here, as already stated, a Papuan folk, whose tribal name, according to Mr. Giblin, is Pem, occupy the coast for some 20 to 30 miles. From their western border to the Cape Nelson peninsula the coast line is inhabited by scattered sections of two stocks, the Oian and Kuberi, both apparently Papuo-Melanesian, between whose eastern and western settlements is the country of the Maisin; these latter are said to be taller than their neighbours. Mr. Giblin states that the language of the

Maisin is Melanesian but has little in common with other known New Guinea dialects, while he fancies he can detect a small Papuan element in the vocabulary. The only Kuberi man seen or measured was a dolichocephal with a cephalic index of 69 and a stature of 1600 millimetres (63 inches). On the Cape Nelson peninsula itself Mr. Giblin states that a single Papuo-Melanesian tribe, the Arifamu, who say that they came from the south, have obtained a foothold. This tribe, as has already been noted, assisted the Korafi in withstanding the western advance of the more eastern Binandere-speaking tribes.

Three Clinical Lectures
ON
THE "ACUTE ABDOMEN."

Delivered at St. Thomas's Hospital

BY WILLIAM HENRY BATTLE, F.R.C.S. ENG.,
SURGEON TO THE HOSPITAL.

LECTURE III.[1]

Delivered on Jan. 18th, 1906.

GENTLEMEN,—In the last lecture perforations of the digestive tract which are of a simple character were considered as affecting the stomach and small intestine. I now desire to draw your attention to perforations of the large intestine which are occasionally met with in practice and which are the result of the giving way suddenly or slowly of what are known as "stercoral" ulcers.

STERCORAL ULCERS.

As recently as 1896 the late Mr. Greig Smith wrote about stercoral ulcer: "Although no special description of this disease has, so far as the writer knows, been written; and although it is not of frequent occurrence nor of great importance, yet its undoubted existence and real gravity may justify its being classed under a separate heading." He then mentions a few instances of intra-abdominal abscess in which a foreign body was found but admits that some of them were most probably due to disease of the appendix. He writes: "The condition as I have met with it is simply a diffuse subperitoneal cellulitis"—and he evidently regarded it as always dependent on the irritation of a foreign body. Some of the abscesses that I have met with on the right side of the abdomen may have been of this mode of origin, but I am inclined to think they were mostly secondary to perforations of the appendix.

Mr. J. Bland-Sutton[2] has given examples of fæcal abscess associated with small but sharp foreign bodies in the large intestine, and Dr. H. D. Rolleston,[3] in a paper on Pericolitis Sinistra, gives instances in which ulceration developed in a diverticulum of the colon and produced suppuration beyond. These ulcerations were rightly called stercoral and were not secondary to any obstruction of the bowel below.

But beyond these groups of cases stercoral ulcers behave very much as ulcers in other parts of the digestive tract; they may perforate suddenly and produce general peritonitis or gradually and give rise to a localised intraperitoneal abscess. When it is remembered that these ulcerations are usually secondary to a condition which of itself is seriously threatening the patient's life it can be appreciated how very fatal they prove. The patient, who is most frequently suffering from chronic intestinal obstruction caused by carcinoma of the large intestine low down, appears to have his last chance of recovery taken away if a stercoral ulcer perforating suddenly floods the peritoneum with the very septic contents of the bowel above the obstruction. In a patient already weakened and distressed by the obstruction this additional attack is usually more than can be successfully combated and proves fatal. When anyone the subject of chronic intestinal obstruction of a mechanical kind complains of sudden increase in abdominal pain and has a rise of temperature, not necessarily a very high one, the possibility of the giving way of a stercoral ulcer must be remembered. This possibility is increased if there is in addition an excessive sensitiveness to palpation, previously absent, but perforation may give no immediate sign of its occurrence, as in the following instance. Some years ago I was asked by Mr. C. Mortimer Lewis, then of Steyning, to see a lady with him who had carcinoma of the rectum. She was over 80 years of age and had only sent for him that morning because her bowels had not acted for a week. He examined the abdomen, found it much distended and tympanitic, whilst the rectum was completely blocked by a carcinomatous growth. When we saw her together a few hours later she was much the same, but without any vomiting. Her temperature had been 100° F., the pulse was good, and the tongue was brown and dry. Incision was made to perform colotomy in the left iliac region, but when the peritoneum was opened it was found to have been flooded with black liquid fæcal matter which was still escaping freely from two ragged openings in the immensely distended sigmoid flexure. These openings (with thin and irregular edges) were situated one above the other in the anterior part of the bowel which passed down behind the middle line of the abdomen. Pints of this offensive fluid came away before it was possible to secure the sigmoid flexure to the abdominal wall. The peritoneum was cleansed as well as possible but the patient did not rally from the operation. In this case it is possible that the bowel had given way in the morning when the patient sent for her medical adviser. Up to that time she had for some days gone on taking dose after dose of medicine without relief, whilst the immense accumulation of fæcal matter above the constriction had caused excessive stretching and local injury to an area of the bowel which had ended in acute bacterial necrosis. The necessary movement from the bed to the operating table may have caused a further escape and diffusion in the peritoneum.

Treatment of this most unfortunate complication should be directed, as in this case, to the cleansing of the peritoneum, the insertion of a Paul's tube in the opening from which the fæcal matter is escaping, and the securing of the damaged bowel to the part of the abdominal wall most easily reached. Strain on the wall of the bowel, usually softened and easily torn, must be avoided. By this means the opening will serve as a colotomy opening and the obstruction will be relieved. Even then the difficulty in cleansing satisfactorily the fouled peritoneum will render the prospect of recovery doubtful. Yet success may occasionally be attained.

On March 27th, 1901, I saw a patient in consultation with Dr. S. Faulconer Wright of Lee. He was 71 years of age and stated that he had always been healthy until the 21st of that month when for the first time he experienced abdominal pain. This was accompanied by vomiting and constipation. Since that time the pain had continued with occasional vomiting and the bowels had not acted. The abdomen was much distended and tympanitic, the note around the umbilicus being high-pitched. There were no diminution of the liver dulness and no evidence of free fluid in the peritoneum. The tenderness was not extreme but he winced perceptibly when touched. His general condition was fair and the temperature was normal. An incision was made in the middle line below the umbilicus and when the peritoneum was opened free gas escaped and fluid fæcal matter was seen covering the intestine in the region of the cæcum and extending into the pelvis. This had come, and was still escaping, from a stercoral ulcer on the anterior surface of the distended cæcum which had recently given way. It was large enough to admit the little finger and its outline was somewhat irregular with thinned edge. Into this a Paul's tube was passed and secured, the cæcum being sutured to an incision in the right iliac region. After the bowel and peritoneum had been cleansed as thoroughly as possible a long drainage-tube was passed into the pelvis and the median wound was sutured. The small intestine was generally adherent, coil to coil, and fixed in the posterior part of the abdomen, evidently the result of an old attack of peritonitis (probably chronic). Under the skilful management of Dr. Wright the patient recovered and is still able to go daily to the City to business. The artificial anus never closed completely, and gradually as time has gone on this opening has become more important until at the present time hardly any fæcal matter finds its exit by the natural anus. The patient wears a flat, circular indiarubber bag containing a large flat sponge and fitting accurately to the abdomen over the artificial anus. This is

[1] Lectures I. and II. were published in THE LANCET of Jan. 27th (p. 201) and Feb. 3rd, 1906 (p. 273).
[2] THE LANCET, Oct. 24th, 1903, p. 1148.
[3] THE LANCET, April 1st, 1905, p. 854.

necessary. The dieting has to be very carefully arranged on account of occasional stoppages which, when they occur, cause considerable pain that is only relieved by the escape of fæcal matter by the artificial opening. His general health has remained excellent.

What the nature of the obstruction was in this case it is impossible to say; the fouling of the peritoneum and the condition of the patient made it inadvisable to explore. The complication of perforation was such a serious one that the clear indication was to treat that more especially as its treatment was calculated to give relief to the obstruction which was responsible for it. The cleansing of the peritoneum was no doubt aided by the limitation of the fouled area in consequence of the old intestinal adhesions. The after-history of the case is instructive, insomuch as the obstruction has often recurred and a "safety-valve" action has permitted of relief on each occasion. It was thought at the time of operation that the obstruction was caused by a carcinoma of the sigmoid flexure, the growth of which is sometimes very slow; anyway, the case is a most instructive and encouraging one.

The surgeon of the present day considers that chronic intestinal obstruction should be rare in actual practice; there must be some neglected cases, but it should not be met with so often in good hands as it is; our knowledge of the early symptoms and of the great possibilities of successful treatment is so much better than it was only a few years ago. However, I am not dealing with that condition to-day in considering the acute abdomen; for although a chronic obstruction may become acute the diagnosis is usually easily made and the indications for treatment are usually straightforward.

"Stercoral ulcer" is one of the most serious complications of chronic intestinal obstruction, even when the peritonitis produced is purely local in its character. In any adult with a history of chronic constipation who gives an account of a more recent attack of pain, usually in the right side of the abdomen, which has been followed by a rise of temperature, examination should be made for the signs of localised extravasation of fæcal matter into the peritoneum. If there is an ill-defined area of dulness in the cæcal region, with tenderness and a sense of resistance, whilst rectal examination shows an apparent thickening on the right side of the pelvis, this complication should be suspected. Fluctuation may be found if the case is seen at a later stage. Should the patient be fat and nervous the diagnosis may be very difficult; even with assistance afforded by the administration of an anæsthetic it may be hard to say that there is much wrong with the side really affected. There is nothing like the definite induration which is found in a case of localised inflammation or suppuration secondary to a disease of the appendix which it resembles closely in some other respects. It comes on in a person suffering from intestinal disturbance; the pain is in the right iliac fossa and is accompanied by increased distension of the abdomen and a rise of temperature. Tenderness is more marked in the right iliac fossa than in other parts of the abdomen. Yet there are differences—stercoral ulcer giving rise to a localised extravasation and abscess is especially met with in elderly females who give a history of chronic constipation, recently more obstinate and associated with "wind in the stomach." The rise of temperature is not great and the area of tenderness is not so easily localised as in appendicitis.

The collection of fæces which forms has a tendency to spread laterally, and it may be the operator will find it up to or beyond the middle line should he make an exploratory median incision to find out the exact site of the obstructing cause when there is a doubt. Whether he thus discovers it by accident or makes direct and intentional incision into the abscess a counter opening will be usually required and the insertion of a large drainage-tube. If the opening into the cæcum be found a tube should be passed into this so that the contents of the bowel which will escape freely may be conducted beyond the abscess cavity. The contents of the abscess cavity, pus mixed with fluid fæcal matter, are extremely offensive, more so than most abdominal collections of a purulent character, and that is saying a great deal.

Under the best conditions the prognosis is bad, the discharge of large quantities of fæcal matter with an increasing admixture of pus causes much local irritation, and may end in rapid exhaustion. Should the parts quiet down and an artificial anus form it is not placed in a convenient position and may lead to all the disadvantages of a colotomy opening on the right side, that is if the obstruction becomes complete. The case under the care of Dr. Wright suggests the possibility of a more satisfactory course of events, the opening acting as a safety valve when required by the temporary stoppage beyond and causing but little inconvenience in the intervals. Another danger in these perforations is the tracking upwards of the pus and the formation of a large collection in the subhepatic or subphrenic regions; a second incision would be required for the better drainage of this extension but exhaustion from the discharge would not unlikely be the ultimate ending of the case. It will be evident that recovery from these collections will take some time, during which the original cause of the trouble—probably a malignant growth—is increasing in size and becoming more difficult to treat satisfactorily.

In the description of the various cases of perforation already given the treatment will be found which was successful in bringing about the desired result, but there are one or two things which require attention. Firstly, as regards the method of cleansing the peritoneum, especially in cases of early peritonitis associated with appendix disease. The important investigations of Mr. L. S. Dudgeon and Mr. Percy W. G. Sargent on the bacteriology of peritonitis have given such evidence as to the condition of the peritoneum that few can doubt that the method of dry sponging is the one which should be generally accepted as the right one. This method of dry sponging must, however, be carried out with gentleness, for it must not be forgotten that it is the method which is employed with the object of inducing the formation of adhesions in cases of portal obstruction. Undoubtedly many cases have recovered after careful flushing with warm saline fluid and others will do in the future, but the strong arguments against this treatment are thus summed up by them:[4] "Limited operations should be the rule, because of the mechanical impossibility of cleansing the peritoneum, the risk of washing away the phagocytes in the exudate beyond the area of most intense inflammation, and the danger of spreading infection over unaffected regions." When the peritonitis is general, or nearly so, or when it is necessary to cleanse the peritoneal cavity from the pus of a ruptured abscess or the contents of the stomach or large intestine, then flushing will be found most useful, whilst occasionally wet sponging will appear to be clearly indicated as the only means of getting rid of the foreign substances.

Drainage should be the rule in all cases of peritonitis when there is pus at the time of operation. In early cases of stomach perforation and perforations of the small bowel it may be possible to close the wound at the end of the operation and without drainage, but there will frequently be cases in which this would be a very injudicious procedure. I do not think that I have ever regretted the decision to employ drainage in the after-treatment of cases in this group.

INTESTINAL OBSTRUCTION.

In the calculation of the percentages of causation of "the acute abdomen" it is found[5] that acute obstruction is responsible for no less than 24 per cent., without including the cases of intussusception, which of themselves constitute 16 per cent. The forms of acute obstruction which are most common, and therefore most likely to be confused with some of the varieties of peritonitis due to perforation of the hollow viscera, are those caused by the action of various forms of bands. Here the resemblance may be very marked, whether the obstruction is incomplete or whether it is complete and the strangulation of bowel absolute. The cases of incompletely strangulated bowel may closely resemble some of the more insidious forms of peritonitis due to perforation or gangrene of the appendix. There may be a history of previous attacks of abdominal pain and perhaps an exudation of free fluid into the peritoneum, with localised tenderness. The temperature record is important, as is also the mode of onset of the attack, a rise of temperature, and maybe an initial rigor, being much in favour of the purely inflammatory nature of the illness.

"Peritonism" (Gübler), abdominal pain, shock, vomiting, &c., are such as described in the cases of perforation of ulcers of the digestive tract, and the same careful examination of the abdomen and consideration of symptoms will be required. The character of the pain is of little value but it is usually much increased by percussion (even when quite gently performed) in peritonitis, more so than by palpation.

[4] Dudgeon and Sargent: The Bacteriology of Peritonitis, p. 185.
[5] Battle and Corner: Loc. cit.

In obstruction percussion is always painless, whilst palpation is more often painful. The abdomen in peritonitis is immobile and rigid, whilst in obstruction it is mobile and soft. Vermicular movements are more commonly seen in obstruction but may be found in localised diffuse peritonitis as in the two cases of perforated simple ulcer of the jejunum described in a former lecture.

In the severely toxic form, or the last stages of peritonitis, the abdominal wall, previously rigid, becomes soft and pliable again. As a rule, in the perforations leading to peritonitis the patient lies quiet with flexed thighs; in obstruction he moves about in bed, altering his position to that which appears for the moment to be most comfortable, and complains of griping pain. In all a careful search should be made for abnormal swelling which in acute obstruction may be found in various parts of the abdomen. As the case progresses general distension of the abdomen increases and any localised swelling will be gradually merged in the general enlargement. Septic absorption and inflammation are superadded and the case becomes practically one of peritonitis of the most grave nature. If seen for the first time at this stage a diagnosis of the exact cause of the inflammation is impossible but prompt measures may yet prevent a fatal termination. Luckily patients do not often permit things to progress to this stage before applying for relief.

It would be obviously impossible to enter fully into all the varieties of acute obstruction which come under the heading of "the acute abdomen." I have selected two which I think are most instructive and have the added advantage of having been under your observation. They represent the typically acute type of obstruction in which there must be no attempt at medical compromise; operation is imperative and must be performed as soon as possible, otherwise the condition passes rapidly beyond the power of relief.

The patient, who is shown you to-day, looking in good health and expressing himself as feeling so, was under treatment here some months ago for volvulus of the small intestine, for which it was necessary to do an extensive resection. The portion of bowel involved was the lower part of the ileum, which is the usual part affected, and the twist was from right to left on the mesenteric axis.

A man, aged 28 years, was admitted to St. Thomas's Hospital on Nov. 7th, 1904, with acute intestinal obstruction. At 4 P.M. on the day before admission he was suddenly seized with pain in the lower abdomen; since that time his bowels had not been open, neither had he passed flatus. There had been vomiting off and on since the onset. The pain had been continuous in character, with paroxysms. On admission it was stated, "The patient's face is drawn with pain, he continually moans and pants. He complains of pain in the abdomen. The abdomen does not move at all in its lower part during inspiration, and movement is poor in the upper part. There is a marked prominence in the hypogastric region in the middle line, looking like a much distended bladder. The percussion note over this tumour is resonant and it is very tender. The liver dulness is not diminished and the abdomen appears to be normal in other parts." The pulse was 120 and the temperature was 100·6° F. Catheterism did not diminish the size of the swelling. When seen with Dr. C. R. Box, under whose care the man was, the local signs had become less acute and there was less complaint of pain. Acute intestinal obstruction was diagnosed, due to volvulus of small intestine or strangulation by a band. The patient was a strong, healthy-looking man without any history of previous abdominal attack.

At 5.45 the abdomen was opened below the umbilicus to the right of the middle line, the rectus being displaced outwards. When the peritoneum was incised a very black coil of small intestine presented; this was very tense and hard and could not be drawn up through the wound. It was therefore punctured and a quantity of fluid, which consisted almost entirely of venous blood, escaped; this had a fæcal odour. This coil was then brought outside and found to be the ileum immediately before its junction with the cæcum. Another coil then presented itself and was also tapped and emptied of similar fluid contents and flatus; it was now possible to lift the whole of the affected gut out of the abdomen. The portion affected was quite black and when emptied of its contents was without resiliency, although the peritoneal covering was not without polish. The twist which had occurred was one on the mesenteric axis from right to left, but when this had been reduced no improvement occurred in the circulation of the affected portion of small intestine; it was necessary, therefore, to resect the whole of this and to include an inch or two beyond. Altogether 43 inches of gut were removed from close to the ileo-cæcal valve upwards, Doyen's clamps being placed on the bowel above and below and the mesentery ligatured after the rapid application of artery forceps to each section before it was divided. The upper end was then joined to the part left at the ileo-cæcal opening with two rows of sutures, continuous, involving all the coats, and a continuous "Lembert" outside that. The upper part of the divided mesentery was also sutured. The pelvis contained dark, blood-stained offensive fluid. There was no lymph present on any part of the peritoneum that came under observation. After washing out the pelvis and cleansing the parts involved in the operation with sterilised saline solution the wound was closed with deep and superficial sutures. Chloroform was administered and during the operation two injections of five minims of liquor strychninæ were given hypodermically and, later, 15 ounces of saline solution per rectum. The operation was well borne.

Beyond the fact that a localised abscess, probably due to bacillus coli infection, formed in the wound and discharged a fortnight after the operation, there was nothing of moment to record in the after progress of the case. Rectal feeding was employed for three days. You can see that there is now a good abdominal wall without hernial protrusion. We had in this case a formidable complication, gangrene of the gut, one which required very prompt measures in dealing with it. Not many hours had elapsed since the onset of obstruction but the strangulation of bowel had been absolute.

Dr. C. L. Gibson[6] of New York collected 1000 cases of intestinal obstruction (including 354 of strangulated hernia) and amongst these were 121 cases of volvulus. These were taken from various medical publications and included those affecting the large intestine, which are by far the most common, constituting practically the only form of acute obstruction of the large bowel. This form of obstruction when affecting the large intestine has a mortality of 46 per cent. When affecting the small intestine the death-rate is 70 per cent.[7] This is accounted for by the fact that the small gut is of far greater importance, whilst the vitality of its walls is probably less. When the small intestine is the subject of volvulus there are greater acuteness and manifestation of shock and possibly its mobility allows of a tighter twist. Knowing the great tendency there is to publish only successful cases it is very probable that Dr. Gibson's statistics[8] are more favourable than they should be. He found only one record of successful resection for gangrene due to volvulus of small intestine and this was performed by Riedel on the second day of obstruction.

A somewhat similar condition is presented by a case of obstruction by a Meckel's diverticulum, the symptoms of which are practically those produced by any kind of band. There is less frequently a history to guide you as to the actual cause of the obstruction in these cases; no account being given of a previous inflammatory attack or of injury, although you may at times hear of occasional "stomach-aches." Gibson[9] gives 42 cases of obstruction by Meckel's diverticulum, as against 186 by bands of various other kinds. This seems to me to be much too high a proportion as compared with actual practice; obstruction due to a Meckel's diverticulum is not a common variety.

The symptoms produced by the compression of small intestine by a band are practically the same[10] as those described when the cause is a twist—peritonism—with the formation of a localised swelling in the lower abdomen, which swelling is resonant on percussion. Any swelling of this kind should be regarded as of the utmost importance and as an indication that nothing but operative treatment is possible. This must be at once declared by the surgeon in charge. The friends will very possibly protest and the patient demand morphine for the relief of his pain, but you must be firm.

At the time of the operation the diagnosis in this case was already becoming difficult, the localised swelling having merged in the general swelling caused by the distended intestines. You should always have operations performed before general distension sets in; in all cases the operation is much more difficult in the face of distension and the result is likely to be so much less satisfactory.

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[6] Annals of Surgery, vol. ii., p. 486, 1900.
[7] Loc. cit.
[8] Collected from publications during the years 1888-1898.
[9] Loc. cit.
[10] Indeed, the two conditions may be combined. See Dr. Hector W. G. Mackenzie, Transactions of the Pathological Society, 1890, p. 127.

A man, aged 46 years, was admitted under the care of Dr. Hector Mackenzie on Feb. 26th, 1905, with acute intestinal symptoms of 12 hours' duration. 12 hours before admission he awoke feeling out of sorts and had a headache. Acute pain soon came on in the region of the umbilicus and he vomited three times in the course of half an hour. The bowels had not acted for two days. On admission he was found to be a heavily built man with a tendency to obesity and was obviously enduring very severe pain, which was not relieved by any change of position. The abdomen was not uniformly distended but there was an obvious rounded swelling in the right iliac fossa. The respiratory movement was poor in the right lower segment of the abdomen. The greatest tenderness was immediately around the umbilicus and the right rectus was the more rigid of the two, whilst a distinct swelling could be defined just below, and to the right of, the umbilicus. The resonance was everywhere normal, there being no sign of free fluid. The pulse was 62 and the temperature was 98° F. During the night the pulse quickened considerably and the temperature commenced to rise. At 10 P.M two enemata were given without result. Hot fomentations and morphine did not fully relieve the abdominal pain. In the morning the temperature was 100·6° and the pulse was 110, and the abdomen was much distended. Dr. Mackenzie was asked to see the patient at 2 P.M. and advised immediate operation, considering the case one of strangulation by band.

At the operation it was found that the cause of the obstruction was the pressure of a Meckel's diverticulum across a large amount of small intestine. The extremity of the diverticulum was firmly adherent to the mesentery and the coils of gut involved were of a chocolate colour and without any resiliency. The mesentery was partly filled with extravasated blood and the vessels were without pulsation; the strangulation had been complete. The diverticulum was divided and most of it removed, the stump being sutured into the side of the gut. About four inches above this a section was made of the gut where it appeared to be healthy and another above the gangrenous part. Altogether 46 inches were removed, an end-to-end anastomosis being effected with two continuous sutures. The peritoneum was cleansed from a small amount of blood-stained, foul-smelling fluid and the wound closed. Remedies were applied to diminish shock. Both lines of suture gave way, the sutures having apparently been placed in damaged bowel; an attempt to close these was unsuccessful and the patient died on March 9th from exhaustion and localised peritonitis. The diverticulum had had its origin eight inches from the ileo-cæcal valve.

In both these cases the progress of events was rapid, the strangulated gut having become gangrenous in a few hours from the onset of symptoms. In dealing with the cause of the obstruction, in the first case it was only necessary to empty the involved intestine and after drawing it from the abdomen twist it round in the required direction. In the second, after the band had been found (not always an easy thing, if one may judge by recorded cases) it required to be divided and the ends afterwards dealt with. I may here remind you of the necessity of examining carefully any band that may be divided during the progress of an operation for intestinal obstruction. I have known the careless division of a Meckel's diverticulum result in a rapidly fatal peritonitis; when other things in the case were favourable to the recovery of the patient the contents of the bowel escaped through the divided open end of the diverticulum and caused a fatal peritonitis. In the appendix cases we are able to excise the diseased part without interfering with the lumen of the bowel; in the perforations of the digestive tract we did not seriously alter the size of the lumen by our sutures. In this group of cases we are met by a very formidable complication which requires special consideration. More or less extensive gangrene of the intestine may suddenly confront you in any acute abdominal case in which operation is performed and you must be able to deal with it on the spot. There will be no time to send a special messenger for button, bobbin, special forceps, or any one of the scores of suggested mechanical aids on which you may have decided to pin your faith in the presence of this complication—you must deal with things as they are at once if you wish to save the life of the patient. The faith which was formerly placed in the special instrument should now be placed in an accurate method of suturing, the judicious selection of the point of section of the gut, and in the precautions against sepsis which you have been taught how to take.

There are many cases of localised gangrene in which it is found that a portion of the gut does not look sound but of which it is not possible to say that it will not recover if placed in favourable circumstances. When the portion of bowel affected is very localised, as when the pressure of the band has produced a transverse lesion, it may be possible to invert this by a row of Lembert's sutures, as suggested by Caird. This you have seen done recently with success.

The treatment of gangrene of the small intestine when the entire circumference is affected will depend on the general condition of the patient and the circumstances of the case, rather than on the extent of the gangrene, for the procedure will be much the same whether you resect one inch or one yard. In favourable circumstances this will be that adopted in the case of volvulus: delivery of the gangrenous part from the abdominal cavity, examination to define the extent of bowel, not only gangrenous but affected beyond this, cleansing of the part, careful packing off of the healthy area with sterilised gauze, covering of the gangrenous part with gauze to prevent possible contamination of the wound, resection, and subsequent joining of the ends.

In the resection of the gut in both cases which I have recorded Doyen's clamps were used and answered their purpose well. I used them because they were handy. In other cases of resection I have used pieces of drainage tube with equal success passed through the mesentery and secured by tying or by forceps. Strips of gauze would answer in case you had no drainage-tube available. The proximal and distal clamps should be placed two inches above or below the line of proposed section in a healthy part. I lay very special stress on this point because in the case of obstruction by a Meckel's diverticulum it is quite evident that the suturing failed because the sutures could not hold in tissue which had been stretched and which underwent afterwards an inflammatory reaction and softening. The bowel appeared to be quite healthy at the time and one was very naturally not anxious to excise more than was absolutely necessary. It is sometimes advisable to cut the bowel a long distance away; for instance, in January, 1905, I resected 16 inches of small intestine in a case of strangulated femoral hernia, although the part affected by gangrene was only about one inch in length. The bowel close to this was not in a healthy state. As each end of the bowel is separated it should be cleaned and wrapped in gauze until wanted. One or two vessels may require ligature. You need not excise a wedge-shaped portion of the mesentery but if it is full of thrombosed vessels there is no object in cutting close to the part to be resected.

The junction of the two ends should be made by careful suturing with a double row of silk sutures. These should be continuous, for they are more rapidly applied than the interrupted and are equally efficient. According to the thickness of the intestinal wall should be the size of the suture; as a rule, No. 1 is right for the adult. The first should include all the coats of the bowel; the second will take only the two outer as a rule. In applying this you must see that the suture has a good hold; if you are satisfied on this point it is not advisable to dip the needle too deeply, for if you pass your outer thread into the lumen of the bowel in the endeavour to get a supposedly stronger hold your patient will probably do badly. When applying the deeper stitch hold the two portions of bowel with forceps, one pair applied at the mesenteric point of attachment of each half, the other to a corresponding point opposite; if a pair of forceps is also placed half-way between these also closely applying the cut edges the suture can be introduced still more rapidly. The omentum should then be sutured so as to present no raw surface to which adhesions can form, the parts involved in the operation cleansed, and the abdominal wound closed without drainage.

The amount of intestine resected in these cases appears large, 43 inches in one case and 46 in the other, but larger amounts have been excised. Mr. A. E. J. Barker,[11] in a very instructive paper on the limitations of enterectomy, mentions a case in which Mr. Hayes of Dublin successfully excised 8 feet 4½ inches of intestine for injury, in a boy, aged ten years. Another paper by Mr. Barker will repay perusal; it is on enterectomy for gangrenous hernia.[12] Many practical points are brought out. He also shows that the amount of shock is much less than you might think from such an extensive operation. I have mentioned these large amounts

[11] THE LANCET, April 27th, 1901, p. 1186.
[12] THE LANCET, May 30th (p. 1495) and June 6th, 1903 (p. 1576).

of excised gut to show what can be done so that you may not be intimidated should you meet with one of these extreme cases, remembering that if the gut at the point of union is sound and you take proper precautions in following the various steps of the operation, you may hope for a success even in desperate circumstances. (The method of operation was demonstrated.)

The effect on the patient of the removal of a large portion of the small intestine is apparently very slight; in the former of the two cases which I have just given details of there was for a time a tendency to looseness of the bowels, but this has passed off and he is now in good health excepting for occasional "indigestion." The effect on the intestine has been recorded by Mr. Barker in two cases in which he had an opportunity of looking at the bowel during life some months (in one case five years) after operation. In both the line of union was sound and without contraction, but the bowel on the proximal side was somewhat larger than that on the distal side and showed smaller power of muscular contraction.

A LARGE TERATOMA OF THE NECK SUCCESSFULLY REMOVED FROM AN INFANT THREE WEEKS OLD.

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With a Pathological Report by CHARLES WORKMAN, M.D. R.U.I., F.F.P.S. Glasg., *Pathologist, Glasgow Royal Infirmary.*

TERATOMATA of the neck are of comparatively rare occurrence and those containing solid matter in the shape of tissues of varied origin are perhaps the rarest of all. In the absence of a previous recorded case it may be claimed for the one now submitted that it is the first in this country to have been successfully removed during life. Whether the lack of reports of operation cases is due to a general belief that these growths are so intimately connected with the individual as to be inoperable, or are confounded with simple congenital cysts (hydrocele) of the neck, is a matter for speculation. It is nevertheless true that in this case some surgeons considered the tumour inoperable. For various reasons, to be detailed later, the operation was performed and the result was sufficient to warrant the undertaking. The case was shown, along with the pathological specimen and sections, a plaster cast, and photographs, to the Pathological and Clinical Society of Glasgow, and Dr. Workman has prepared some excellent micro-photographs and photographs of the cast, as illustrations to this paper, in addition to the pathological report.

The use of the word teratoma (Virchow) has been questioned in connexion with this case inasmuch as it is restricted by some to cases where there is inclusion of another fœtus, or part of one, or to fission of the parts of an embryo (Cleland), but Ballantyne[1] classifies congenital tumours into disomatous and monosomatous tumours, and of the latter variety this case falls within the category of the subsection "c" described in that excellent classification among branchial anomalies.

The diagnosis of congenital cysts of the neck, particularly of those situated in the upper segment, is frequently that of "hydrocele of the neck" and three main causes of these cysts are enumerated by Bland-Sutton[2] as (1) those arising in the same plane as the laryngeal saccules in certain apes; (2) those due to secondary changes in nævi; and (3) some as dilatations of lymphatics. The same author also refers to "smaller cysts in the neighbourhood of the sterno-mastoid due to distension of imperfectly obliterated branchial clefts." The case under consideration differed from these in that the cystic growth contained also solid matter, described in the clinical report as of cartilaginous hardness, and afterwards verified by the pathological report. Excluding dermoid cysts and blood tumours, such as venous dilatations, the case therefore seemed to fall under the classification of monosomatous terata of the neck and it was not likely to be benefited by drainage of the cyst alone. The possibility of its being a parathyroid tumour should also be considered in the differential diagnosis. The relatively enormous size of the tumour at birth and its pressure effects, as well as the probability of its continued growth, seemed sufficient warrant for operative interference, though no similar recorded case was found as a precedent.

The patient, a female, aged 15 days, was admitted into the Glasgow Royal Infirmary on August 28th, 1905, with a large tumour of the left side of the neck which had been present at birth. The following family history was obtained. Both parents were living and well. There were two sisters and a brother; the brother died at the age of four and a half months from "peritonitis"; the sisters were alive and well. There were no other abnormalities in the patient nor in any of the other children. The following was the patient's condition on admission. On inspection, as the child lay on her back the tumour seemed to extend from the clavicle upwards to the middle of the cheek and from near the middle line in front to the anterior border of the sterno-

FIG. 1.

Infant on admission.

mastoid muscle posteriorly (Fig. 1). It projected considerably from the level of the jaw and its bulk seemed a little less than the size of a closed fist. The measurement over the tumour from the middle line to the posterior edge of the sterno-mastoid was six and a half inches, as compared with two and a quarter inches on the normal side. The shape of the tumour was roughly oval, the long axis occupying a line from the mid-point between the symphysis and the angle of the jaw, outwards and slightly downwards. There was one marked projection on the anterior inferior aspect; the other irregularities consisted of rounded elevations. Palpation of the mass more clearly defined the shape and limited the inferior margin of its attachment to a point about one inch below the thyroid cartilage; its anterior margin could not be separated from that structure; its posterior border overlapped the anterior edge of the sterno-mastoid muscle in the upper three-quarters of its extent. On the superior aspect it was readily ascertained that the tumour overlapped the lower jaw and was an extension upwards from the neck. Its upper border extended from a point half an inch behind the symphysis menti along a line curving upwards to the inferior edge of the malar bone and downwards to a point midway between the angle of the jaw and the external auditory meatus. The skin was freely moveable over the whole extent of the tumour and was normal in appearance. The tumour itself was fairly moveable for the most part; being pendulous and of considerable weight it moved with alterations in position of the child, and this feature was very marked, inasmuch as the child's breathing became difficult, almost to asphyxia, when she was turned on her right side. Manipulation of the tumour produced noisy breathing and it was noticed that when the child cried the tumour seemed to project outwards and to become more prominent. So far as it was palpable

[1] Teratologia, vol. ii., p. 316.
[2] Tumours, Cassell and Co., p. 423.

the tumour was distinctly encapsuled and the external projection was softly fluctuant. In other parts the consistence was more firmly elastic and one or two rounded elevations were of cartilaginous hardness. In particular, one small tumour, situated within the softer cyst, was independently moveable and felt like a nodule of cartilage. The skin over the prominent part of the growth was very thin and at this point the tumour was translucent. Pressure did not diminish the size of the tumour. Examination of the mouth revealed no abnormality. No other deformities, either of defect or excess, were observed, except perhaps a faint nævus mark at the root of the nose; in particular, the right side of the neck seemed to be normal. There was no difficulty in swallowing and the taking of food had no apparent effect on the size of the tumour. After several unsuccessful attempts some photographs and a cast of the tumour (Fig. 2) were taken while the child was partially anæsthetised.

FIG. 2.

Plaster cast of infant on admission.

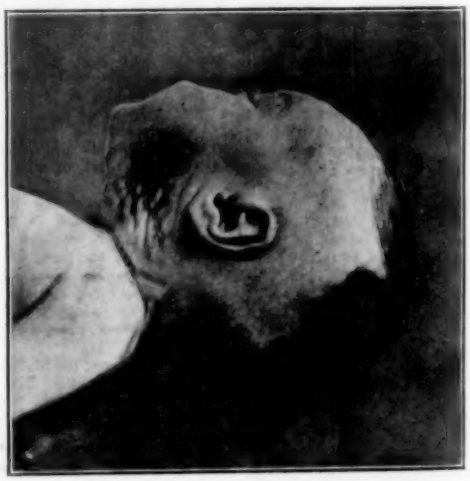
On Sept. 6th the patient (aged 24 days) was put under the influence of chloroform and an incision was made over the tumour in a line parallel to the margin of the lower jaw. The soft cyst was incised and was found to contain some clear and some milky fluid, a small quantity of flaky white matter, a number of cysts, and some solid tissue. The wall of the cyst was rapidly separated from the structures of the neck; on its outer side were the carotid sheath and vessels, and more deeply, and towards the upper margin, two arteries were seen to enter the capsule in a position which suggested branches of the lingual or facial; the veins left, at about the same part of the capsule, in two main trunks. Anteriorly the capsule was separated from the thyroid cartilage and muscle without much difficulty, and the last part to be separated was a fascial attachment to the hyoid bone on its posterior aspect. The vessels passing through the capsule were caught with pressure forceps before being cut; on the removal of the growth the cut ends were ligatured; and, lastly, the wound was sutured by a continuous catgut suture. A catgut drain was inserted. The main difficulty of the operation consisted in the interference with respiration when the tumour was moved towards or away from the middle line, the work being done, literally, between breaths. On the 12th the wound was dressed and the drain was removed. On the 22nd the wound was again dressed; it was quite healed, but as the catgut sutures were still firm the dressing was reapplied. On the 30th most of the catgut sutures were removed, the wound being quite healed. The neck had a peculiar appearance due to the large gap and to the wrinkled state of the loose skin. The child had taken her nourishment and was thriving well (Fig. 3). On Feb. 1st, 1906 (five months after the operation), the child was seen, when there was no sign of recurrence and with the exception of the redundant skin the neck seemed normal.

Remarks.—The problem presented by this case was that of the feasibility of operative interference. It was perhaps natural for the parents to desire that the growth should be removed at any risk. The presence of the tumour was a constant danger to the life of the child, for its weight was such that in certain positions the breathing was impeded; in others it was stopped. In addition to the risk caused by its weight and bulk, the possibility of its continued growth was a menace to the child's life, for this was apparently not one of the simple cysts which are said to disappear spontaneously. The presence of the hard solid matter was recognised before operation and the pathological report not only confirms the opinion as to the presence of cartilage and other connective tissue elements but indicates that some parts were of a malignant type. On the other hand, the risk of operation was undoubtedly great. The infant of three weeks could ill afford to lose blood. The shock of an operation among the deep structures of the neck, as well as the necessary interference with respiration, were serious factors against success.

The element of time was necessarily a most important point in the operation and it was hoped that as the cyst wall was well defined it might be possible to shell out the tumour throughout the greater part of its extent. This fortunately proved to be the case and the whole operation lasted only 12 minutes, notwithstanding the fact that the work had to be stopped every few seconds to allow the infant to breathe. In order to diminish the duration of the operation and the amount of shock a continuous catgut suture was used and no attempt was made to remove the superfluous skin.

Pathological report by Dr. WORKMAN.—"The tumour from the child, aged three weeks, handed me by Dr. A. N. McGregor is a multilocular cystic mass of about the size of a turkey's egg and of an irregular conical shape. In one or two of the larger cysts there is a solid, very vascular growth which, on cutting into the tumour, bulged out from the cysts. This growth is very soft, while the other parts of the tumour vary greatly in consistence, some parts being of

FIG. 3.



Appearance of neck after healing of wound.

cartilaginous density, but nowhere is the tissue of osseous hardness.

Microscopic sections were prepared by the celloidin method, from the cystic part of the tumour, and also from the intracystic solid growth. The sections were stained with hæmatoxylin and eosin. The cystic part consists of a series of cysts, varying in size from microscopic minuteness to that of a walnut. Some of these cysts are lined with a single layer of cuboidal or rounded cells, with large round or

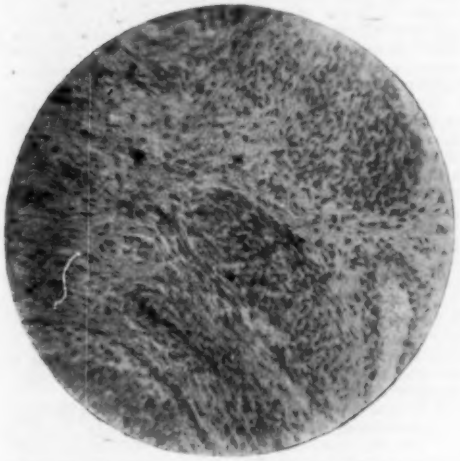
oval nuclei; some appear to have several layers. Others have the lining membrane thrown into voluminous folds and this membrane is covered with large columnar cells with oval nuclei, which take the hæmatoxylin stain very deeply, while the part of the protoplasm towards the free ends of these cells remains almost unstained. These latter cysts have the characters of dilated gland-ducts and lend an adenomatous appearance to the tumour sections.

The intercystic part of the tumour is of very varied character, containing cartilage, spindle-celled connective tissue, non-striated muscle, arteries, veins and capillaries (see Figs. 4 and 5), and at one part there is an area which

FIG. 4.

General view of the cystic portion of the tumour, showing various tissues. × about 50 diameters.

FIG. 5.



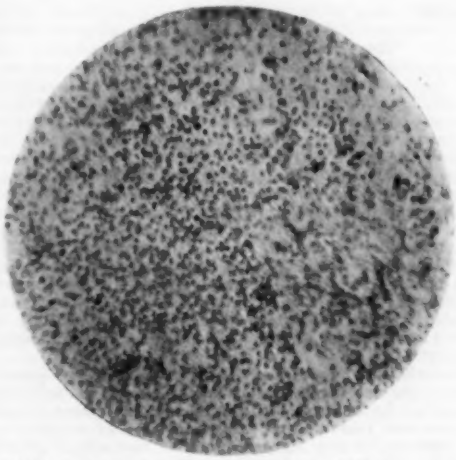
Section of intercystic tissues, showing cartilage, fibrous tissue, &c. × about 300 diameters.

shows the character of a capillary angioma. The solid growth which protrudes from one of the cysts has the appearance on section of a round-celled sarcoma (see Fig 6), the cells being of medium size and having well-marked single round nuclei; towards the surface this part of the tumour is inclosed in a layer of small cysts flattened together and lined with a single layer of rounded cells (see Fig. 7). The whole tumour is of such complicated structure, containing both mesoblastic and epiblastic elements, that I consider it has probably originated from an abnormal development of one or more of the branchial arches of the embryo."

Note.—The photographs are taken from slides stained in the ordinary way and mounted in Canada balsam. (See Figs. 4, 5, 6, and 7.)

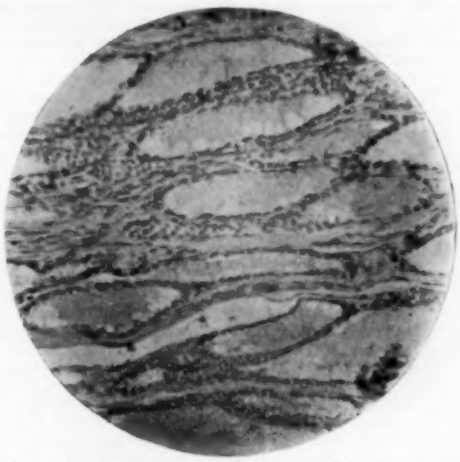
The structure of the tumour, as set forth in Dr. Workman's report, shows it to be not only an error of development but a sarcoma, and this evidence of malignancy seems to me to warrant operative interference. For lack of experience and, in the face of reported cases of simple cysts, one would hesitate to advise surgical interference in all cases; at the same time, it is possible that a large cyst, tense with fluid,

FIG. 6.



Solid round-celled sarcoma-like mass. × about 300 diameters.

FIG. 7.



Section of the surface part of the solid round-celled sarcoma-like mass, having the character of compressed cysts with single layer of rounded or cubical cells. × 300 diameters.

might obscure the presence of solid tissues at the base of the growth. An exploratory incision into the main cyst in all cases would not only allow of a thorough examination but would be of great assistance in the radical operation should that be considered possible. In the case here reported the primary opening of the main cyst was of great assistance during the rest of the operation.

In conclusion, I desire to express my indebtedness to that most complete book of classification and reference, Ballantyne's "Teratologia."

Glasgow.

A CASE OF PERSISTENT ABERRANT THYMUS.

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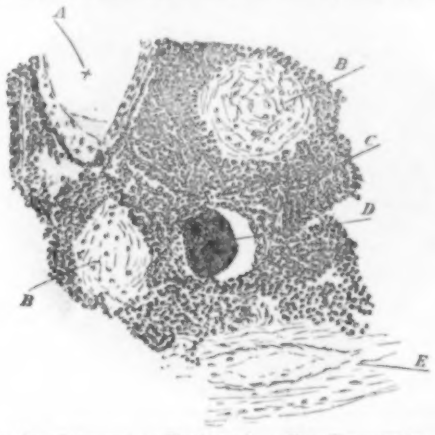
THE patient, a female, aged 24 years, sought advice about a swelling in her neck, which had first been noticed when she was 11 years old, at which time constitutional treatment was tried to reduce it, but it had gradually grown larger and given rise to a marked swelling, situated at the base of the neck on the left side and extending from beneath the posterior border of the sterno-cleido-mastoid muscle to the anterior border of the trapezius and also passing behind the clavicle. The superficial veins over the surrounding area were somewhat engorged; there had never been any pain associated with it. The tumour was felt to be subcutaneous, lobulated, and firm; the skin was freely moveable over it. Removal of the tumour was somewhat difficult owing to adhesions and to extension of the growth deeply into the base of the posterior triangle of the neck on the left side where it had a firm fibrous pedicle which was cut through and ligatured. Primary union followed. The growth, which was of about the size of an ordinary potato, had the structure of a lobulated gland with a capsule and intersections of fibrous tissue. On section, for which I am indebted to Dr. J. Phillips and Dr. F. W. Eurich, it was found to consist of a mass of leucocytes, containing in their midst numbers of Hassall's concentric corpuscles of various sizes, some invaded by the leucocytes. The growth was divided by fibrous intersections, of which the larger contained fair-sized blood-vessels.

Remarks.—Owing to the lateral position of the growth thymus did not suggest itself and the diagnosis was only completed by the use of the microscope. Here I may mention that there was no extension of the growth beneath the sternum or any signs of anterior mediastinal growth present. No instance of such a position of a thymus growth can I find in literature. As regards causation, the patient when younger had grown rapidly and is unusually tall; possibly this abnormal growth of thymus may have some connexion with this just as the opposite conditions are associated. Dudgeon[1] and Fortescue-Brickdale[2] having observed "that in various atrophic conditions in children



Section of tumour. A, Blood-vessel. B, Hassall's corpuscle. C, Small cell infiltration. D, Mass of closely-packed leucocytes. E, Fibrous intersection.

fibrosis of the thymus, with the resulting functional extinction, occurs with great rapidity, so that it has been said that an estimate of the nutrition of an infant may be formed by an examination of the thymus gland."

Prognosis.—In a full and interesting paper in the *Clinical Journal* of Jan. 4th, 1899, on Thymus Tumours Dr. H. D. Rolleston differentiates between (1) simple persistence, (2) hypertrophy, and (3) hyperplasia of the gland. This case corresponds to his description of hyperplasia in which instead of the normal arrangement of the gland found in hypertrophy the whole field is obscured by small round cells resembling the lymphocytes of a normal thymus. The Hassall's corpuscles do not share in the hyperplasia and are only seen in the remains of the normal thymus. There were no signs of malignancy about the growth.

The thymus is itself a paired epithelial tube derived from the third, fourth, and partly from the second branchial clefts; it then undergoes ramification and gives rise to condensation of the connective tissues around,[3] which then became infiltrated with leucocytes as soon as they are found in the body; thus the more permanent part of the thymus is formed. The epithelial elements become changed into the concentric bodies known as Hassall's corpuscles.

The accompanying illustration, reproduced from a drawing by Dr. Phillips, illustrates a portion of the section well.

Great Horton, Bradford.

[1] Dudgeon: Journal of Pathology and Bacteriology, 1904-05, vol. x., p. 173.

[2] Fortescue-Brickdale: THE LANCET, Oct. 7th, 1905, p. 1029.

[3] Gulland: Laboratory Reports of the Royal College of Physicians of Edinburgh, vol. iii., p. 172.

A SACCULAR DILATATION OF THE SMALL INTESTINE.

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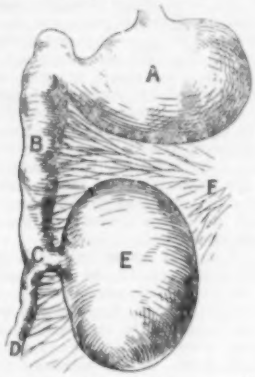
THE following description is that of a remarkable anomaly of development of which I can find no other recorded case. Nor am I able to indicate how the malformation might arise. The patient, from whom it was obtained, was a female infant who died while under my care, at the age of five weeks, in the Metropolitan Hospital on May 14th, 1905. She was admitted on April 27th with a history of vomiting since the third day of life. This had steadily persisted and, after the seventh day, had been associated with diarrhœa. The vomiting followed every meal. Both the vomited matter and the stools were green. She was the first-born child, somewhat small, of healthy parents. Her weight on admission was 4 pounds 13 ounces and she was rather ill-nourished. Nothing abnormal was found on examination except in the abdomen. This was unduly prominent on the right side and a tumour of about the size of a pullet's egg could be felt to the right of, and on a level with, the umbilicus. The tumour presented most peculiar characters. It was fairly moveable, elastic, sometimes dull and at others resonant on percussion, and it would disappear entirely after moderate gentle manipulation. The liver dulness in front was completely absent. An inguinal hernia was present on the left side.

On May 3rd the patient's condition was quite unchanged. Vomiting was infrequent. There was no diarrhœa and the stools were small, formed, and green. She was then fed on whey and given small doses of cocaine. She took food well, the vomiting ceased, and the stools became almost normal. On the 7th she weighed 5 pounds 2 ounces. On the 10th she was put on feeds of diluted milk. Two days later vomiting began again, but it stopped after two doses of cocaine and a return to the diet of whey. Apparently she was going on well, but on the 14th she had a convulsion, with carpo-pedal spasm, cyanosis, and unconsciousness. After about ten minutes she revived. On the following day she became very feeble and cold and died from asthenia. There was no return of vomiting or diarrhœa.

Post-mortem examination.—On opening the abdomen a cyst with opaque walls was seen immediately below the liver. The transverse colon was pushed downwards and the liver upwards, so that the edge of the latter was not visible, thus accounting for the absence of liver dulness anteriorly during life. The liver was very much flattened. The gall-bladder was very small and its tip was one and a half inches from the edge of the liver. The cyst was considerably larger than the stomach, which was of normal size. Roughly the cyst measured three inches vertically, two inches transversely, and one inch in the antero-posterior diameter. It was situated in the mesentery, arising from the gut at a distance of 15 inches from the pylorus. It communicated with the gut by two adjacent openings close together, the larger one being as big

as a threepenny-bit and the smaller one quite minute.[1] The edges of the openings were smooth and irregular. In general appearance the cyst can be best described as similar to a saccular aneurysm of the aorta with a small orifice. The duodenum and a small part of the jejunum above the origin of the cyst were much dilated and hypertrophied, while below the intestine was thin-walled and collapsed. Opposite the cyst the lumen of the canal seemed somewhat narrowed from pressure but there was no true stricture. Both cyst and intestines contained normal bile-stained contents. Microscopically, the wall of the cyst was identical with that of the intestine from which it arose, the muscular tissue being considerably hypertrophied.



Diagrammatic representation of the sac. A, Stomach. B, Hypertrophied and dilated duodenum and jejunum. C, Constriction at level of opening into the sac. D, Thin gut below the constriction. E, Sac. F, Mesentery.

Thus the post-mortem conditions clearly explain the symptoms present during life. The vomiting was due to pressure of the cyst, when full, on the lumen of the canal, causing intestinal obstruction. The alterations in resonance, the moveable character, and the disappearance of the tumour on manipulation were the results of the variable amount of distension of the cyst and the gradual emptying of it by gentle pressure. This also explains the variable character of the vomiting. When the cyst was more or less empty the obstruction produced by pressure of the cyst on the intestine would be absent.

Naturally the diagnosis was extremely difficult. Although life might have been saved by surgical measures I did not feel justified in recommending operation. The history of persistent vomiting, beginning a few days after birth, suggested intestinal stenosis. Congenital hypertrophic stenosis of the pylorus could be excluded by the character of the vomiting and the presence of bile in the vomited matter. Moreover, such a diagnosis would not explain the presence of the tumour. After careful consideration I took the view that the case was one of incomplete stenosis of the gut, due to a congenital defect of development, and that the variable tumour was the result of dilatation of the gut above the stricture, increased at times by peristaltic contractions. Its disappearance I thought was due to intestinal gas and other contents being forced through the narrowed channel by gentle manipulation. The fact that a diet of whey could be absorbed and caused a marked diminution of vomiting, indicated that there was a reasonably patent opening. For that reason I postponed surgical interference in the hope that the child's condition would improve sufficiently for it to undergo operative treatment.

It is conceivable that a true mesenteric cyst might arise in a similar manner, being cut off entirely from communication with the intestinal tract. Gradually increasing distension would lead to thinning of the wall to such an extent that it might be impossible to recognise its structure.

Upper Brook-street, W.

[1] In the diagram too distinct a neck is ascribed to the sac.

THE NEWPORT AND MONMOUTHSHIRE HOSPITAL.—During 1905 the "Newport Workmen's Fund" raised £1861 for the funds of the Newport and Monmouthshire Hospital.

PNEUMOTHORAX DUE TO MUSCULAR EXERTION IN A HEALTHY LAD.

BY W. GIFFORD NASH, F.R.C.S. ENG.,
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ON Nov. 8th, 1905, a strong athletic lad, aged 18 years, was playing as a forward in a football match. 40 minutes from the start he obtained the ball and ran with it until he came to the back, over whose head he kicked it. The ball went out of play and he stooped down to pull up his right stocking. Whilst doing this he was seized with severe cramp-like pain in the right side of his chest just below the nipple. He was unable to continue playing. A medical man on the field examined him and finding great dyspnœa thought he had broken a rib and applied a towel to support the chest wall. The lad was carried to a house near by where I saw him two hours after the injury. He was propped up in bed suffering from considerable pain in the chest and great dyspnœa. The respirations were about 60 per minute and the pulse was 72. The pain was located below the right nipple, at which point friction could be heard. Discomfort was also felt in the epigastrium and at the root of the neck. No fracture of the ribs could be detected and it seemed to me that the diagnosis lay between a rupture of the diaphragm and rupture of the intercostal muscles. I strapped and bandaged the chest, which gave great relief. On the next day his respirations were 40, his pulse was 72, and his temperature was 99·4° F. This was the only occasion on which there was any rise of temperature. A short cough suggestive of pleurisy was present. There was not at any time any expectoration. I came to the conclusion that the diaphragm was uninjured as the breathing was chiefly abdominal and free from pain. It occurred to me that the symptoms might be caused by a rupture of the lung and I kept a sharp look out for signs of pneumothorax.

On Nov. 12th, the fourth day after the onset, all typical signs of pneumothorax were present—viz., bulging and loss of movement of the right side, displacement of the heart's apex to the left of the left nipple, obliteration of the liver dulness which gradually diminished until it entirely disappeared, hyper-resonance on percussion, absence of normal breath sounds, amphoric breathing and the bell sound. On this day the respirations were 24. On the 17th I introduced a fine trocar and cannula without any benefit. On the 19th respirations were 18. On the 29th air was drawn off with an aspirator. On Dec. 5th the heart's apex beat was in the normal position and on the 12th all signs of air in the pleural cavity had gone. At the time of puncture and aspiration no fluid of any kind escaped from the chest.

Remarks.—Simple pneumothorax from muscular effort is so rare that every case is worth recording. Stephen Paget[1] says: "A few cases seem to show that a severe strain may cause slight laceration of the surface of the lung and pneumothorax, even though the lung be healthy." I believe that this case comes under this category.

The ordinary explanation given of pneumothorax is that it is due either to rupture of a superficial tuberculous focus or to rupture of an emphysematous bleb or tearing of a pleuritic adhesion. In the case under consideration there was no suspicion of tubercle. The lad was previously perfectly healthy and the son of healthy parents. There were no evening rise of temperature and no cough except on the day following the injury. There was no expectoration and there was no effusion of anything but air into the pleural cavity. The "rupture of an emphysematous bleb" theory is more probable but there had been no illness likely to cause emphysema and the severity of the symptoms at the beginning of the attack, before pneumothorax was detected, pointed to a more serious injury than the rupture of a small bleb. The tearing away from the surface of the lung of a pleural adhesion might explain the pneumothorax but there was no history of any antecedent pleurisy. On the whole the evidence rather points to a superficial rupture of the lung near its lower anterior margin. A distended lung is more easily lacerated than an empty one and the lung would naturally become engorged by hard running such as is necessary at football. When any part of the lung is suddenly compressed it may burst. In the case under notice

[1] Surgery of the Chest, p. 86.

the engorged margin of the lung was probably squeezed between the diaphragm lying over the liver and the anterior chest-wall.

It is difficult to conceive why hæmorrhage into the pleura did not occur to any detectable extent, especially when one reads of Dr. G. Newton Pitt's fatal case[1] where many pints of blood were found in the pleural cavity of a lad and the only source of the bleeding was a ruptured emphysematous bleb and a small torn adhesion. Dr. F. Parkes Weber in the Transactions of the Clinical Society of London, 1900, p. 171, discusses the cause of pneumothorax in apparently healthy persons.

As to the treatment adopted in this case—viz., tapping and aspirating the chest to draw off the air—I doubt whether it was a wise procedure, as the air generally becomes absorbed in one or two months and the risk of sudden death from puncture of the chest is not a negligible quantity.

Bedford.

CASES OF STOMATITIS AND TONSILLITIS IN WHICH VINCENT'S SPIROCHÆTA AND BACILLUS WERE PRESENT.

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AND
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THE following are the notes of eleven cases of stomatitis and tonsillitis in which the spirochæta and fusiform bacillus first described by Professor Vincent were present. The cases presented themselves for treatment at St. Thomas's Hospital, the first of our series appearing on Nov. 15th, 1905, and were drawn from the surrounding districts of Lambeth and Wandsworth. The majority of our cases occurred in children under seven years of age, three cases only occurring in adults. In most of them the onset of the disease was insidious, the parents merely noticing that the child did not take his food or complained of a sore throat; in some the onset was characterised by headache, furred tongue, general feeling of malaise, and a sore throat. In all cases there was marked offensiveness of the breath.

In those cases where the tonsil was the seat of the disease the appearances were as follows: there were some swelling and inflammation of the tonsil which was covered with a greyish white membrane showing a tendency to invade the uvula and anterior and posterior faucial pillars. This false membrane did not resemble the thick white membrane that occurs in diphtheria, but presented more the appearance of a superficial necrosis with exudation. In one case, however, the tonsil was covered with several greyish-white patches very closely resembling that sometimes seen in diphtheria; bacteriological examination of a swab made from this case showed no diphtheria bacilli but the presence of Vincent's spirochæta and bacillus. Removal of this membrane caused bleeding and it was then apparent that slight or considerable excavation of the underlying tissues had taken place according as the case was a mild diphtheroid one or a severe ulcero-membranous one. There was moderate enlargement of the cervical glands with elevation of temperature varying from 100° to 103° F., usually falling to normal about the fourth or fifth day. The tonsil was the seat of the disease in four of our cases and in three of these there were carious teeth in the mouth. The cases healed rapidly with antiseptic mouth washes and no suppuration occurred in the cervical glands.

In the remaining seven cases where the buccal mucous membrane of the cheek or gums was affected the appearance presented was similar to that of an ulcerative stomatitis. In all these cases carious teeth were present in the mouth and it was apparently round these that the disease had arisen. The gums were spongy and bled easily; the breath was very offensive. At the edge of the gum round the carious teeth there was a narrow margin of necrotic tissue. The teeth in many cases were loose and in five of the seven cases there was a greyish-white necrotic patch on the mucous membrane of the cheek opposite the carious teeth. The cheek itself was swollen and œdematous. Both from the edge of the gum round the decayed teeth and from the necrotic area on the mucous membrane of the cheek the spirochæta and fusiform bacillus of Vincent were isolated. The cervical glands were moderately enlarged. The removal of the false membrane from the buccal surface of the cheek caused bleeding and left an excavated surface similar to that seen on the tonsil. In the severest case of our series the disease had commenced at the margin of the gum behind the two upper incisor teeth, which were healthy, though the left lower molar was much decayed. The teeth soon became loose and a deep slough formed, which on removal exposed a small area of bare bone of the alveolar process. The cavity is at present healing by granulation and though the disease started five weeks ago the process is not yet complete.

In every case the diagnosis was confirmed by the presence in the swab taken from the mouth or tonsil of one or both of the organisms described by Professor Vincent. Although the tonsillar lesions might easily be confounded with diphtheria it is significant as indicating the characteristic clinical appearance of the disease that in every case of this series, the first only excepted, the clinical diagnosis was confirmed by the bacteriological report, and there were, on the other hand, only some four or five cases examined with a negative result in which a doubtful diagnosis of Vincent's angina had been made.

In ten out of the 11 cases both the spirilla and the fusiform bacilli were present, in one case the fusiform bacilli only; in this case several long, slender, curved bacilli were seen in places, forming one well-defined loop but no definite spirilla. In two cases large numbers of other organisms were present, the fusiform bacilli and spirilla being so much in the minority that a prolonged examination was necessary to demonstrate them. In both these cases the swab had been incubated for from 12 to 24 hours before being examined, and we consider this to be a point of great importance in the diagnosis of these cases, for unless an early examination of the swab be made the spirilla and bacilli tend to die out, while the other organisms present grow prodigiously. In the remaining cases the swab presented an almost pure culture of the organisms, enormous numbers both of the spirilla and the bacilli being present under every field of the microscope.

It was found advisable in taking the swab to remove a portion of the membrane and to rub the swab well into the exposed ulcerated and bleeding surface; then at once to make films upon cover-slips in the usual way. The simplest method of staining is with the ordinary solution of Löffler's methylene blue for from 10 to 15 minutes or for about three times as long as that usually employed for demonstrating the diphtheria bacillus, since the spirilla take up the stain less readily than the other organisms and so might readily be missed unless a special search were being made for them. A slightly more elaborate but certainly more satisfactory method of differentiating the fusiform bacilli is by a modification of Leishman's stain, as suggested by Mr. L. S. Dudgeon and employed by him in staining the spirochæta pallida; by this method the fusiform bacilli are stained blue and the granules purple, in distinction to a coarser, more uniformly staining bacillus often present in oral swabs; the spirilla also are well stained by this method. Both spirilla and fusiform bacilli lose their stain by Gram's method.

The fusiform bacilli are slender, beaded, usually curved bacilli, tapered at both ends and occasionally seen in short chains of two or three. The spirilla vary considerably in length, thickness, and the number of their spirals, the usual number being from five to eight; the organism which they most resemble is the spirochæta pallida, from which they are readily distinguished by their larger size and the greater coarseness and irregularity of their spirals; the average number of spirals is also less in the organisms of Vincent. Occasionally, as in the case of the spirochæta pallida, the spirillum is seen to terminate in a small, circular, head-like extremity with a clear centre, but these extremities are unusual, vary greatly in size, and do not appear to be anything more than the end of the organism curved back upon itself. The spirillum bears no resemblance to the small curved vibrio present about decayed teeth and which has been described by Miller and by Finkler and Prior. The relationship between the fusiform bacilli and the spirilla is not clear and since we are unable to cultivate the organisms we are ignorant of their life-history; in this connexion the

[1] Transactions of the Clinical Society of London, 1900, p. 95.

interesting suggestion was made by Dr. F. G. Bushnell in a letter to THE LANCET[1] that bodies similar to the Leishman-Donovan bodies of kala-azar might form a stage in the life-history of this organism, as also of the spirochæta pallida.

We have made several attempts to cultivate these organisms but without success, though Professor Vincent in his paper in THE LANCET[2] stated that the fusiform bacilli were readily cultivated in the ordinary media; the media we have employed have been agar, blood serum, bouillon, milk, and peptone water, and attempts have been made, both aerobically and anaerobically, at temperatures of 37°C. and 42°C., resulting only in a profuse growth of the common cocci and bacilli of the mouth. Owing to the ease with which these organisms may be missed if swabs and cultures are taken, incubated, and examined in the manner customary with suspected cases of diphtheria, coupled also with the fact that many cases of ulcerative and even membranous stomatitis are not examined at all with a view to their bacteriology, we would suggest that cases of Vincent's angina are by no means so uncommon in this country as the rarity of cases hitherto reported might lead one to expect. The cases described by Dr. H. W. Bruce in THE LANCET[3] closely resemble those of this series in which the disease was confined to the tonsil. In addition, we have included seven cases of stomatitis in which the lesions exactly resembled those of the tonsillar cases.

Considering the frequent association of carious teeth with this disease it would be of interest to know in what proportion of cases of carious teeth, unaccompanied by membranous ulceration, the organisms of Vincent can be demonstrated; in a few cases examined by us only the ordinary bacteria of the mouth or the small curved vibrio of Miller have been seen. Since we have found that the organisms rapidly disappear from the mouth and the lesions readily improve under treatment, at any rate, in these comparatively mild cases, and since such cases are possibly infectious and if left untreated tend to progress, we have thought it worth while to place on record an account of the few cases observed at St. Thomas's Hospital during the past three months.

NOTES ON A CASE OF ADDISON'S DISEASE, RAPIDLY FATAL, WITH SYMPTOMS OF ACUTE TOXÆMIA.

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THE patient, a man, aged 38 years, was admitted to the Radcliffe Infirmary, Oxford, on Sept. 29th, 1905, under the care of Dr. W. Collier. He was sent to the hospital with a note from a medical man describing the case as one of rheumatic fever of one day's duration. The temperature was 101·2° F., rising in the first six hours to 103·8°, and the pulse was 120. The skin was not sweating. In colour it was rather dark all over the body. The face and hands were like those of a man who had worked generally in the open air and in the sun. The areolæ of the nipples were deeply and symmetrically pigmented. The scrotum and penis were unusually dark, as also were the axillæ but to less degree. There were no other areas of pigmentation on the body, or on the buccal mucous membrane, or on the tongue or conjunctivæ. There was great pain in the ankles, the knees, the elbows, and the wrists and shoulders on movement. Severe pain was produced by pressure on the plantar fascia in both feet. The joints were not reddened and no excess of fluid was detected in any of them. The heart was not enlarged but the sounds were feeble. The pulse was markedly feeble on both sides. The abdomen appeared to be normal. There was no pain. The liver, the kidneys, and the spleen were not felt. The patient was a little deaf. The urine had a specific gravity of 1017 and contained a cloud of albumin but no sugar. Casts were not looked for. The patient was quite cheerful and did not seem depressed or low spirited. He gave his own history. He said that he had been at work on the preceding day and had had to stop on account of severe pains which came on in the knees, and within a short time invaded the ankles, the wrists, the elbows and the shoulders. He had never had rheumatism or any attacks similar to the present one. He had always been a healthy man and had taken about two or three pints of beer a day. No history pointing to tuberculosis in the family was obtained. The patient was treated with 60 grains of salicylate of sodium in the first six hours (in 20-grain doses) and subsequently with 20 grains every six hours. On the evening of Sept. 30th the temperature was 98·4° and the pulse was 106. On Oct. 1st and 2nd the temperature remained at 98°, the pulse being 96, and the patient was losing all pain from the limbs. He was taking only milk and broth. The milk he objected to—it always disagreed with him. He was sick once on each of these days—each time after taking milk. There was nothing characteristic about the vomit. On the 3rd the patient seemed a little strange in his manner and was inclined to be restless, especially at night. He was, however, quite rational and answered questions correctly. On the 4th the temperature was 97·4° in the morning. The salicylate of sodium was stopped. The amounts of urine for the first three days (Sept. 30th and Oct. 1st and 2nd) were 25, 30, and 23 ounces respectively. The bowels were opened with cascara on Oct. 1st and 2nd. The stools were normal. The patient appeared to be more ill. On the 5th the urine had altered to a brownish-red, smoky colour, and gave the blood reaction with guaiacum and ozonic ether. It contained a thick brown deposit. Under the microscope numerous red cells, a few granular casts, and much débris were seen. A number of crystals of leucine were also present. On the 6th and 7th there was profuse diarrhœa and at the same time great frequency of micturition, about from two to three ounces of urine being passed every few hours. The urine was smoky and contained a thick brown deposit of débris but no leucine. On the 6th two of the stools contained practically only bright red blood and mucus, intimately mixed. The other stools contained only a little fæcal matter and darker blood. The last two or three stools on the 7th contained no blood. The patient's general condition had got much worse. He was rapidly sinking into a profound typhoid state. On the 7th the temperature rose to 100·2° and the pulse to 116. The patient complained of slight pain in the abdomen on the 6th. It was worse on the 7th. He referred it to the centre of the abdomen. Pressure just above the umbilicus caused pain. The liver dulness was one inch in extent in the nipple line but it was normal in extent in the mid-axillary line. The ears were examined and both were found to be normal. On the 8th the patient became much more lethargic and difficult to rouse. In the evening he was semi-comatose, but pressure in the abdomen between the umbilicus and the right costal margin caused a good deal of pain. On the 9th the temperature rose to 101° in the morning and to 104° in the evening, when death took place.

The post-mortem examination showed typical fibro-caseous tuberculosis of both suprarenals. No normal suprarenal tissue was seen. The right kidney was large and showed many nodular prominences; it measured five inches by two inches. On section the whole organ was converted into a series of cysts, filled with a putty-like material. The right ureter was blocked and was filled with cheesy matter and the walls were caseous. The left kidney showed marked compensatory hypertrophy and measured six inches by three inches. No tuberculous masses were present. There were two small caseous foci in the right globus major of the testis; the vas was healthy to the naked eye. The bladder and vesiculæ seminales showed no change. No other tuberculous foci were found either in the glands of the thorax or the abdomen, or in the lungs. The right internal ear was examined and was found to be healthy.

Two days before the patient died the following history was obtained from the wife. The patient was a healthy, hard-working man. On Sept. 1st he was taken ill (away from home) and had to go to bed. The chief symptoms were shivering and a change in the colour of the skin. One person, at least, said that the patient had the "yellow jaundice." The wife did not know if the whole body altered in colour. There was no sickness and the patient had a good appetite. The mind was clear. On the 6th he was able to go home but for the next week he had to keep in bed or sit over the fire as he suffered continuously with the "cold shivers." There was a discharge of "matter and blood" from the right ear. No history pointing to definite rigors was obtained. There was no information as to the

[1] THE LANCET, Dec. 9th, 1905, p. 1728.
[2] THE LANCET, May 13th, 1905, p. 1260.
[3] THE LANCET, July 26th, 1902, p. 155.

urine or the fæces. On the 16th the patient improved sufficiently to leave home to visit some friends, but the discharge from the ear continued. On the 25th he was well enough to start work. On the 28th the pain in the limbs began and he was admitted to the infirmary on the 29th—29 days after he was first taken ill. Death took place on Oct. 9th—39 days from the onset of illness.

There are several points of interest in connexion with this case. When the man was admitted the clinical picture was that of acute rheumatism, with the exception of the sweating. The rapid subsidence of the temperature and the disappearance of all pain in the course of 48 hours on large doses of salicylate of sodium only supported this view. It was not until the mental condition arose and the blood appeared both in the urine and in the fæces that a diagnosis of some general toxic condition was made. Although the pigmentation was marked on the external genitals and in the nipples there was none found elsewhere either in the mouth or on points of pressure. The diminution of the liver dulness and the pain in the abdomen, especially marked towards the end in the liver region, accompanied by leucine in the urine, suggested acute yellow atrophy of the liver. The presence of the high fever on admission and after Oct. 7th was also unlike Addison's disease. In addition the man had been a healthy hard-working man up to four weeks before admission. The difficulty of making a diagnosis was much increased by the history of discharge from the ear which suggested some secondary septicæmia. The case is instructive from two more points of view—history taking and routine examination. The great importance of taking accurate and lengthy histories in all cases where it is possible is not sufficiently taught to students. Too frequently the method adopted is to obtain a short history and to rush at once to the physical examination of the patient. That in a great number of cases the diagnosis is completely made from the history alone is a fact which is not sufficiently emphasised in teaching. The patient's own history should also be verified as far as possible by a few questions put to a friend or relative. The patient may himself think some little point or symptom too trivial to mention and may, in fact, as in the present case, neglect altogether a short illness of a few days. The picture of acute rheumatism, with the patient's statement that he was only taken ill the day before, I took to be sufficient and it was not until the further symptoms arose that I sought for more history from the wife. Routine examination is not, of course, possible in every case. But although one hears a very great deal about the value of thorough routine examination by the bedside it is not often one hears very great stress laid on the value of including the testes in that examination. In three very common classes of cases—namely, malignant disease, syphilis, and tuberculosis—the examination of the scrotum and its contents may be of the utmost importance and may make the diagnosis. In this case the presence of the two nodules in the globus major would certainly have helped.

Radcliffe Infirmary, Oxford.

A METHOD OF REMOVING CARCINOMA OF THE ASCENDING COLON.

BY FREDERICK D. BIRD, M.B., M.S. MELB., M.R.C.S. ENG.,
LECTURER ON SURGERY AT THE UNIVERSITY OF MELBOURNE.

As a rule cancer of the colon has but a mild malignancy. It will be found in the natural history of the tumour that half the patients die before the growth has transgressed the limits of the bowel. Occasionally rapid growth and dissemination are seen. I know of one such case, but most cases are of such small virulence that if our technique is good we have an excellent chance of ridding the patient of his disease. The lymphatic glands apposite to the growth, by no means always carcinomatously affected, are of great resistance and stay for a long period the progress of the cancerous elements. Metastatic developments are unusual and occur only after a considerable lapse of time. They appear to have the same low malignancy as the parent growth and may give no sign of their presence for years.

These characteristics of the disease are favourable to the patient if we can give him operative success. For the surgeon there is a good deal to aid him technically—e.g., the mass can generally be well delivered through the wound so that the resection and anastomosis can be made extra peritoneally, the colonic area is distinctly less susceptible to germ infection than other parts of the serous surface, the blood-supply is excellent, and its valency can be easily insured. The glands are found and removed with facility and their ducts are not involved on either side till late in the disease. These assets, however, are operatively more than balanced by conditions which cause much anxiety to the surgeon.

The gut has a redundant mucous membrane, strong muscles which produce anti-peristalsis as well as its opposite, and there exists a peritoneal covering the extent of which the surgeon cannot gauge until he actually sees it. The part which he has to remove is bounded above by a natural angulation, which has probably increased a good deal with the patient's advancing years, and below by a cul-de-sac, the normal large size of which is still further enhanced by the presence of the obstruction beyond and the fermenting nature of its contents. This cæcum thus becomes almost a closed segment and when we consider the tumour ahead and the sphincter of the ileum on the hither side we do not wonder that absence of drainage allows of almost indefinite bacterial growth. The natural flora is intensified in maleficent qualities and inhibited as to its physiological uses. The cæcal and appendical mucus is much altered in quantity and character. This place, the antithesis of all for which the surgeon wishes, cannot be properly emptied or even slightly antisepticised except by a previous opening, which but partially fulfils its objects, while it certainly infects the surrounding operative area. The eminently perilous and fluid cæcal contents will have to pass over the recently made junction, the mechanical resistance of which may be high but the vital resistance of which must be lowered. The inner aspect of the stricture is probably ulcerated, which by allowing absorption further embarrasses the lymphatic glands; thus everything may be said to be in an explosive state.

These considerations influenced me recently in a case of carcinoma of the ascending colon about three inches beyond the cæcum to operate by what I believe to be an improved method. Shortly after this first case I had the opportunity of repeating the procedure and being equally pleased with the results, both at the time of operation and afterwards, I thought it worth while to detail the *modus operandi*, which, I take it, neutralises many of the above-stated disadvantages. No intestinal preparation except careful dieting is attempted. No purgation is used or antiseptic given. Enemata are administered but a purgative would only futilely irritate the bowel above the growth and possibly precipitate a perforation. The abdomen is entered through the sheath behind the rectus internal to the linea semilunaris. The tumour is located and its removal being decided on the transverse colon is pulled down, two forceps are applied to it close together, a heavy one on the proximal side, and the gut is divided with large scissors in one cut. Swabs are used to avoid soiling the cavity, and the heavy forceps attached to the gut is allowed to hang out of the wound, a proceeding which puts the mesocolon on the stretch. The branches of the middle colic artery are easily found, for they stand out by reason of the tension and the fact that they are the thickened arteries of an elderly person. Two or three branches have to be secured. The right colic artery now invites attention, and can readily be tied far back by a single ligature; this devascularises a large portion of mesocolon, which can be speedily severed by large scissors. The amount of gut at present hanging out of the wound is considerable, as the cæcum "is in the air" without support. The resulting traction shows the ileo-colic trunk in strong salience. Forceps are then placed on the ileum, about four inches from the junction of the great and small intestine, and the gut is divided; the distal end now depends from the wound, so that the whole portion to be resected is hanging by the ileo-colic artery and some peritoneum. This blood-vessel is ligatured far back, the isthmus of tissue left is divided close to it, and the resected gut, two forceps, and the ileo-colic glands fall out of the wound all together. There is no need to investigate the important ileo-colic lymphatic area, for it has gone, but the mesocolic region should be examined for glands which may have escaped the section. Thus four, or at most five, arteries have to be tied; the transverse colon is divided at right angles to its lumen, but the ileum, if it approaches the calibre of the colon closely

enough to allow of apposition, is severed in a direction obliquely downwards to the mesenteric attachment, which, of course, increases the size of the open end. If the disproportion be too great the ileum is also separated at right angles, the patent lumen to be afterwards applied by means of temporary sutures to an incision proportionate in length in the fundus of the colon about two inches from the gaping end, through which the stay ligatures are pulled, reversing Maunsell's method, and the new ileo-colic junction is quickly made by through-and-through sutures, to be reinforced after the ileum is pulled back by a continuous Lembert suture. The end of the colon being closed the operation, but for ordinary detail, is completed.

The disadvantages of the procedure are: 1. That a large amount of gut is removed. In the first case the specimen proved to be 13 inches long and in the second 16 inches. Much of this gut is healthy, but the portion with the greater physiological importance—viz., the cæcum and possibly the appendix—is diseased from chronic irritation and inflammation of the mucous membrane, the glandular functions of which have been grossly altered. 2. The acid chyme now passes directly from the ileum into the transverse colon, where it lacks the mollifying influence of cæcal and appendical mucus. This undue haste in the intestinal current may with its acidity still unneutralised in reaction conduce to colon irritability and diarrhœa, but it must be remembered that this new state of things is tempered by the facts that an attempt at a sphincter probably arises in time at the new junction, that the current is against gravity as in the natural ascending colon, and that the colon is much shortened, there being therefore much less colon to be irritated. In this connexion it was interesting to note that in each case the bowels acted freely with large motions a few hours after the operation, which can hardly be accounted a disadvantage.

The benefits are several: 1. That the disease is very freely removed, especially the dangerous ileo-colic glands. 2. The removal is practically in one mass. 3. That the intensely dirty and dilated intestine just above the stricture is, with the equally dirty cæcum, removed by incisions which do not approach these perilous pouches. Examination of the specimens showed that no purgation or artificial anus could have cleansed what is a sewer when pathological, though an important physiological absorbing cavity when healthy, as we could only rid the small diverticula of their contents by forceps. 4. The ends of the portion to be resected immediately after division hang out of the wound by virtue of the weight of the forceps, thus an important source of contamination is safely diverted. 5. The arteries are easily found, are tied far back, and thus are very few in number. There is no danger whatever of devascularising a portion of intestine not resected. 6. When the resected portion has fallen entirely out of the wound the cut end of the colon will be found lying in close proximity to the cut end of the ileum. The natural sagging of the transverse colon in elderly people aids this propinquity. There is no tension whatever on the join. 7. The ends to be coapted are both entirely peritoneal, whereas if we use the ascending colon we can never be sure how much non-peritoneal surface will be discovered. 8. The angle of the hepatic flexure, rendered more acute by the dropping of the transverse colon, is abolished and with it a considerable liability to pseudo-ileus. The bowels act soon and though the motion may be acid in reaction it comes directly from a place where the mucous membrane is healthy. 9. The removal of the intestine is a much speedier procedure than might be expected, taking no more time than its description above. It reminds me of the facility with which the gall-bladder is separated when the duct and artery are ligated far back and what is to be the specimen is stripped from behind forwards. The resection is not difficult, most circumspection is needed above, the branches of the middle colic requiring much more care in being picked up than the bigger right colic and ileo colic arteries. Regard must be had lest the duodenum or stomach be injured, as the traction draws down the stomach a good deal. Division of Toldt's ligament allows the flexure to be stripped out easily. The rest of the extirpation is very simple.

Two sutures are necessary to close the peritoneal hiatus, the edges of which fall appositely together. The avoidance of a preparation which includes purgation and an artificial anus commends itself strongly to me on both pathological and surgical grounds. In both my cases where obstruction was still some distance off an improvement was noticed in the patient when the intestinal mass with its load of poison was eliminated; how much more, then, will relief be given in such a case if actual obstruction exists, and this relief can be brought about without a previous opening of the distended obstructed gut and with little risk of soiling the operation area with poison from within.

It is thus from technical reasons and not from Metchnikoffian motives that I advocate this large resection. I shall watch with interest the future intestinal habits of these two patients to note, if I live long enough, whether "the nature of man" is in their case altered by the removal of so much of the large bowel. In a patient whose cæcum I removed seven years ago by a less liberal resection, the only symptom at the present time which can possibly be traced to the absence of cæcal and appendical mucus is a small but persistent discomfort in the region of the sigmoid flexure, which with the cæcum gone becomes the main resting place of what may still be acid contents.

Melbourne.

MALTA FEVER IN INDIA—ISOLATION OF THE MICROCOCCUS MELITENSIS FROM THE MILK OF A DOMESTIC GOAT IN THE PUNJAB.

BY W. H. C. FORSTER, M.B., C.M. EDIN., D.P.H. CANTAB.,
CAPTAIN, I.M.S.; DEPUTY SANITARY COMMISSIONER, PUNJAB.

THE history of Malta fever in India, though short, is not devoid of interest. Wright, by means of the agglutination test, was able to demonstrate the specific reaction with the serum of patients invalided from India as the result of an obscure and long-continued fever. These observations were confirmed and extended by Lamb and Birt. On his return to India Lamb, by means of the same test, was able to prove that natives of India who had never left the country suffered from Malta fever. Cases were soon reported from various parts of the country and the existence of Malta fever as an endemic disease in India seemed to be established beyond the possibility of doubt. Very shortly, however, doubts were raised and so strongly was the opposite view urged that at the beginning of the present year it was officially held that Malta fever had not been proved to exist as an endemic disease in India. In the circumstances it became a pressing necessity that the micrococcus Melitensis should be isolated from suspected cases of Malta fever. This work was taken in hand by Lamb and Pais[1] who speedily disposed of all doubts on the subject by isolating the micrococcus Melitensis from the spleens of a number of persons suspected to be suffering from Malta fever. Lamb and Pais had barely concluded their observations when the papers of Dr. Zammit and Major W. H. Horrocks were received in India.[2]

Lamb and Pais, in the course of their work, had shown that Malta fever was actually epidemic in three cantonments of the Punjab and so I decided to repeat the observations of Dr. Zammit and Major Horrocks on the goats supplying milk to these cantonments. A reference to the laboratory records showed that cases of Malta fever had recently occurred in the 14th Sikhs stationed at Ferozepore and I therefore decided to commence operations there. At Ferozepore I found that the conditions were peculiarly favourable for the observations I proposed to carry out. The goat-stock of the cantonment, exclusive of animals the private property of officers and their servants and kept in the compounds of their owners, numbered about 1000 head. This total, however, was made up of a number of small herds, the property of individual goatherds, who had parcelled out the cantonment amongst themselves for the purpose of milk-supply. Each unit was always supplied with milk by the same goatherds and I was thus able at once to locate the herds from which the 14th Sikhs had been supplied with milk throughout the year. These herds conjointly amounted to about 100 head, of which some 50 odd were giving milk at the time of my visit. Every facility was afforded me by the officer commanding the regiment and with the aid of Major T. A. O. Langston, I.M.S., in medical charge of the regiment, I was at once able to test the blood of the goats

[1] Scientific Memoirs. This paper is in the press.
[2] Proceedings of the Royal Society, Series B., vol. lxxvi., 1905.

supplying milk to the regiment. Long experience in handling goats has convinced me that the easiest, most expeditious, and least painful method of obtaining blood from goats in large or small quantities is to draw it off from the jugular vein by means of a hypodermic syringe. Briefly the procedure adopted was as follows.

A series of small glass tubes of one cubic centimetre capacity and provided with a cotton-wool plug was placed handy in suitable small racks. A goat was placed on the table, the hair over the region of the jugular vein moistened with carbolic lotion, about an inch of the course of the jugular vein was freed from hair with a sweep of a razor, and about 0·5 cubic centimetre of blood was drawn off with a hypodermic syringe. The blood was transferred from the syringe to one of the small glass tubes and the latter was numbered with a grease pencil. A linen tab bearing the same number was then tied round the neck of the goat and the animal was released. The syringe was then washed out with normal salt and the next goat was taken in hand. In this way samples of blood were taken from 38 goats and the animals were provided with identifying numbers in less than an hour. When the last sample had been taken the first samples were ready for testing.

The test culture employed was a dead emulsion in normal salt of a strain of micrococcus Melitensis that had been isolated some months previously from the spleen of a patient suffering from Malta fever in Ferozepore. This strain had been carefully tested against normal goats' serum by Captain W. F. Harvey, I.M.S., in connexion with some other work, and it had been found that normal goats' serum failed to agglutinate it when employed in a higher dilution than 1 in 5. In applying the agglutination test Wright's macroscopic method was used. The serum of each goat was tested against the dead emulsion in a dilution of 1 in 20 with the following results.

Number of goats examined.	Number of goats that reacted.	Percentage of reactions.	Distinctive numbers of goats that reacted.
38	4	10·5	10, 12, 17, 27

In Malta Kennedy[3] found that the serum of 26 per cent. of the goats examined gave a positive reaction in a dilution of 1 in 20, but the number of goats examined by me is too small to justify any comparison. Of the four goats which gave a positive reaction the serum of Nos. 10, 17, and 27 when further diluted gave a positive reaction in a dilution of 1 in 100 but failed to give any reaction in a dilution of 1 in 1000. After inspection of these goats Nos. 10 and 27 were purchased and removed to the Pasteur Institute, Kasauli, for further investigation.

Bacteriological examination of the milk of Goat 27.—I selected this goat to commence with as it was obviously ill. The animal was thin and listless and had a rough, staring coat. On Oct. 29th milk was withdrawn and four cubic centimetres were centrifugalised. The deposit was then spread over six litmus-glucose-nutrose-agar plates. After 24 hours' incubation at 37° C. three plates showed a few red colonies indicating the growth of extraneous organisms. After three days' incubation all plates showed a dense crop of colonies characteristic of the micrococcus Melitensis. Films were prepared from these colonies and stained with watery fuchsin and by Gram's method. These films showed that the organism isolated had the characteristic appearance and staining reactions of the micrococcus Melitensis. Some of the colonies were then planted out on agar slopes and the resulting growths were subjected to the following confirmatory tests: 1. Growth on agar slope. No growth after 24 hours' incubation at 37° C. After 48 hours' incubation discrete dewy transparent colonies. 2. Growth in litmus milk. After three weeks' incubation at 37° C. no clotting was observed and the reaction of the medium was alkaline. 3. Growth on litmus-glucose-nutrose-agar. Small circular bluish colonies, the tint becoming more pronounced as the age of the colonies increased. 4. Emulsification. The organism readily emulsified in normal salt. 5. Reaction to specific sera. Wright's macroscopic method was used and the organism was tested side by side with the laboratory stock culture against the serum of an immunised rabbit and also against the serum of the naturally infected Goat 27. The rabbit was immunised by intraperitoneal injections of killed cultures of a strain of micrococcus Melitensis which had been isolated from the spleen of a person suffering from Malta fever by Lamb and Pais some months previously. The results are set forth in the attached table. It will be noticed that the

Table showing Serum Reactions of Micrococcus Melitensis isolated from the Milk of Goat 27 and of the Laboratory Stock Culture.

Serum dilutions.	Normal goat serum and M.M. (F.).	Serum of Goat 27 and M.M. (F.).	Normal goat serum and M.M. (L.).	Serum of Goat 27 and M.M. (L.).	Normal rabbit serum and M.M. (F.).	Immune rabbit serum and M.M. (F.).	Normal rabbit serum and M.M. (L.).	Immune rabbit serum and M.M. (L.).	Control. Normal salt and M.M. (F.).	Control. Normal salt and M.M. (L.).
1 in 20...	+	+	0	+	+	+	0	+	No agglutinations.	No agglutinations.
1 in 40...	+	+	0	+	×	+	0	+		
1 in 80...	0	+	0	+	0	+	0	+		
1 in 160...	0	+	0	+	0	Almost +	0	+		
1 in 320 ..	0	+	0	+	0	0	0	0		
1 in 640...	0	Almost +	0	Almost +	0	0	0	0		
1 in 1280...	0	0	0	0	0	0	0	0		

M.M. (F.) = The micrococcus Melitensis isolated from the milk of Goat 27.
M.M. (L.) = The laboratory stock culture of micrococcus Melitensis.
+ = Complete agglutination.
× = Partial agglutination.
0 = No agglutination.

organism isolated from the milk of Goat 27 was completely agglutinated in a dilution of 1 in 40 by normal goats' serum and by normal rabbits' serum in a dilution of 1 in 20. Strains of micrococcus Melitensis which can be agglutinated by relatively high dilution of normal serum are, however, by no means uncommon. The complete correspondence between the organism isolated from the milk of Goat 27 and the laboratory stock culture in the reactions with the higher dilutions of the specific sera employed is sufficiently convincing.

To sum up, the organism isolated from the milk of Goat 27 agglutinates with a specific animal serum in a high dilution, does not ferment glucose, renders milk alkaline without coagulation, gives the characteristic microscopical appearances of micrococcus Melitensis, and does not retain the stain by Gram's method. In the words of Major Horrocks,[4] such an organism "may justly be regarded as the M. Melitensis."

Owing to the press of official duties at this time of the year I was unable to carry out personally the serum tests for the identification of the organism in question. These were carried out for me by Captain Harvey, director of the Pasteur Institute of India, in his laboratory and I have much pleasure in expressing my gratitude to him for this and many other kindly acts of assistance during this investigation.

Amritsar.

[3] Reports of the Commission for the Investigation of Mediterranean Fever, Part iii.

[4] Ibid., part i.

POST-GRADUATE STUDY AT ANCOATS HOSPITAL, MANCHESTER.—We understand that a series of post-graduate demonstrations will be given by the members of the medical and surgical staff of this hospital at 4.15 P.M. during the last two weeks in February and the first two weeks in March. Dr. Richard W. Marsden will take the subject of Diseases of the Chest, commencing on Feb. 23rd, and Dr. F. Craven Moore will deal with Diseases of the Stomach, commencing on Feb. 21st. Mr. E. Stanmore Bishop will discuss various departments of Abdominal Surgery—namely, Uterine Prolapse and Procidentia on Feb. 20th, Urinary Surgery on Feb. 27th, Gall-bladder Surgery on March 6th, and Intestinal Surgery (including the Operative Treatment of Ulcer of the Stomach) on March 13th. All members of the medical profession are invited

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF ILIAC ABSCESS; DEATH FROM ACUTE SPINAL MENINGITIS.

(Under the care of Mr. G. R. TURNER.)

FOR the notes of the case we are indebted to Mr. W. Fedde Fedden, surgical registrar to the hospital.

A man, aged 28 years, was admitted to St. George's Hospital on Jan. 12th suffering from a painful swelling in the right groin and a temperature of 101° F. The patient had had pain in the right groin for three weeks. The right hip-joint had been kept at rest in the flexed position during the last week and two days before admission a swelling appeared in the groin. The patient had never been strong and had had trouble in the region of the right iliac bone for ten years. There were no cough and no history of pulmonary tuberculosis either in himself or in any of his family. A strongly marked insane tendency was present, the patient's father having committed suicide and the patient himself having been in Hanwell Asylum two years previously after an attack of influenza. When admitted he was in obvious pain in the region of the right hip; the joint was kept still and flexed at a right angle; a limited amount of movement was possible and it caused pain, but the joint itself appeared to be free from disease. Over the sacrum was a scar of an abscess which was opened six years ago and which healed up quickly. No pain was felt on jarring the sacro-iliac joint and there was no evidence of disease in the dorsal or lumbar vertebræ. At the middle of the iliac crest was the scar of an operation done ten years ago, and here a sinus existed with blue undermined edges, and this had discharged on and off ever since. The crest of the bone in this region appeared to be thickened. In the groin a fluctuating swelling both above and below Poupart's ligament was to be made out which only appeared 48 hours before admission. During the next two days the patient's temperature varied between 101° and 103° and his mental condition was unsatisfactory. He slept but little and was delirious at nights.

The abscess was opened just internal to the anterior superior spine and about a pint of pus was evacuated. The abscess cavity extended underneath the femoral vessels and upwards into the iliac fossa; the venter ilii was completely bare and the finger could be passed over the brim of the pelvis. The iliacus muscle had apparently disappeared and the peritoneum above was much thickened. The cavity was thoroughly irrigated with saline solution and the wound was closed with sutures. After the operation the patient had no sleep and was delirious and the urine had to be drawn off by catheter. Three days later he suddenly took a change for the worse with a rapid and irregular pulse. The temperature dropped to 97° and subsequently rose to 104°. Saline intravenous transfusion and strychnine injections were given, but a few hours later he again collapsed and then passed into a semi-comatose condition. After this he never recovered, the collapse remaining and increasing until he died, about 20 hours after the first indication of any serious complication. The pus removed at the time of operation was reported to contain numerous staphylococci. No tubercle bacilli were found.

Necropsy.—The abscess was found to originate at the inner surface of the ilium, which was carious. A huge retro-peritoneal abscess extended upwards beneath the psoas and downwards through the upper part of the obturator foramen and into the buttock, where it ramified in all directions. The pus infiltrated the muscles on the right side of the spine but there was no caries of the vertebræ themselves. Pus exuded along the spinal nerves on both sides. The brain was congested, but there was no meningitis. The whole spinal cord was thickly covered with green pus, the path of infection being most probably along the sacral nerve roots. No special features worthy of note were discovered either in the thoracic or abdominal viscera.

Remarks by Mr. FEDDEN.—This case is worthy of being recorded on account of its unusual termination. The man was suffering from a marked sapræmia which lighted up the old tendency to insanity. The infection of the spinal meninges *via* the sacral nerve foramina has not, as far as I am aware, been recorded in a similar case previously. During life he did not show any special signs whereby spinal meningitis might have been diagnosed and it was only post mortem that the condition was discovered. The infection of the meninges apparently did not immediately follow the operation, but appeared about three days later, and the condition of purulent infiltration about the spinal cord was extremely marked. I am indebted to Mr. G. R. Turner for permission to publish this case.

AYR COUNTY HOSPITAL.

THREE CASES OF SARCOMA OF THE FEMUR.

(Under the care of Dr. J. W. NAISMITH and Dr. A. YOUNG.)

FOR the notes of the cases we are indebted to Dr. John Allan, late resident medical officer.

CASE 1.—This case is of interest, because there was spontaneous fracture of the femur. The patient was a man, aged 43 years, and was admitted to Ayr County Hospital on Dec. 19th, 1904. The history was as follows. Towards the end of November, 1904, the patient was seized with severe pain in the right thigh. The pain was sometimes felt in the front of the thigh, sometimes at the back, and was most excruciating and kept him awake at night, often necessitating the administration of an opiate in order that he might get sleep. It was shooting in character and pain was often felt at the right ankle. His medical man outside treated him for sciatica. About a week before admission when turning in bed one day he was seized with a sharp cutting pain high up in the thigh. He said it felt as if nails were being driven into the thigh at that point from above and from below. About the middle of September and towards the end of October he had had attacks of severe shooting pains in the thigh, but both these passed off in a few days and he was able to get about.

On admission to hospital the patient screamed out with pain when being lifted into bed. He lay in bed quite fixed and kept his thigh absolutely rigid. The slightest attempt to move the limb caused him the most excruciating pain and it was impossible to test the effect of pressure along the course of the sciatic nerve. The pain seemed rather to be on the front of the thigh but was felt posteriorly as well. He was put on 20 grains of salicylate of sodium every six hours and turpentine stupes were applied locally. There was no improvement under this treatment and as his thigh and leg had a tendency to be everted it was decided to examine him under an anæsthetic. It was then found that there was a fracture of the femur just below the trochanters. He was examined with the x rays two days later and the fracture was easily seen. The femur was also seen to be expanded at its upper end. Sarcoma was diagnosed but operative interference was considered hopeless owing to the tumour being so high up. The limb was put up in extension and a Liston's long splint. This gave relief for a time. The swelling gradually increased and the splint had to be adjusted frequently. The extension was taken off early in January, 1905, but the splint was kept on, as it steadied the part and the patient felt more comfortable when it was on. When matters were explained to the patient he accepted the inevitable and he bore himself manfully and heroically to the end. The swelling, however, became so great that in the beginning of February, 1905, the splint was taken off. The subsequent history can be dismissed in a few words. The swelling gradually increased and the thigh became of enormous dimensions. Dr. Allan took measurements a few weeks before his death but unfortunately he lost the paper on which he noted the figures. So far as he remembered there was a difference of eight inches in the circumferences of the two thighs and a difference of six inches in measurements taken from the anterior superior iliac spines to the gluteal folds. The patient had to have opium constantly to deaden the pain and before death he was having from 90 to 120 minims of nepenthe daily. He died on March 23rd, 1905. No post-mortem examination was allowed.

CASE 2.—This case is of interest because it closely simulated tuberculosis of the knee-joint. The patient was a woman, aged 21 years, and was admitted to hospital on Dec. 26th, 1904. The history was as follows. For about three months the patient had been troubled with slight pain in the left knee, but this was not of such severity as to prevent her going about. Five weeks before admission she fell and hurt her left knee and from that time the symptoms became acute. The knee began to swell and was very painful. About two weeks later she began to have starting pains at night. The swelling increased and the pain became more severe and she was sent into hospital by her medical man for operative treatment.

On admission to hospital the left knee was much swollen and was very tender to the touch. The pain was chiefly on the inner aspect of the knee. The swelling was pretty uniform but was slightly more marked on the inner side. It gave one the distinct sense of fluctuation. Starting pains at night were complained of. Movements were limited. The swelling was somewhat of the "leg-of-mutton" shape but there was no crackling elicited on palpating it. There was nothing of importance in her family or social history and her health otherwise was good. The diagnosis lay between tuberculous knee and sarcoma of the lower end of the femur. The patient required sedatives frequently so great was the pain. She was kept under observation for a few days and hot fomentations were applied frequently to the affected knee. No improvement, however, took place. The temperature, which was 100·2° F. on admission, rose to 102·4°, and remained high till after the operation, when it fell to normal. Permission was obtained to operate and to deal with what was found. Under chloroform the knee-joint was incised and the true nature of the condition was ascertained. The limb was consequently amputated about the middle of the thigh. The lower end of the femur was sent to the Clinical Research Association, London, and the report confirmed the diagnosis made. The stump did not heal by first intention but it did not suppurate. Healing was delayed for some considerable time by a serous discharge coming away. Eventually it healed well and the patient was discharged apparently cured on Feb. 25th, 1905—apparently cured, because Dr. Allan found that the disease returned at the upper end of the femur some months afterwards and this proved fatal.

CASE 3.—This case can be dismissed in a few words. The disease occurred in a newly-born child. The child was taken to hospital two days after birth on account of a swelling at the lower end of the right femur. The swelling was pyramidal, the base being below and was somewhat elastic to the feel. The part was examined by means of the x rays and the lower end of the femur was seen to be expanded. The case was apparently one of sarcoma. The child was of such low vitality that operative measures were not deemed justifiable. Death, in fact, supervened two days later (January, 1905).

Remarks by Dr. ALLAN.—The above three cases of sarcoma of the femur came under my notice when resident medical officer at the Ayr County Hospital. They are somewhat uncommon and present several points of interest and peculiarity. In looking at these cases it is interesting to note that they all came under observation within a month of one another. Curiously enough, too, I could find no case of sarcoma of the femur mentioned in the records of cases treated in the hospital during the last 25 years. The above cases show that it may occur at any age from earliest infancy to late adult life. Case 2 is especially interesting because the condition so closely simulated tuberculous disease of the knee-joint. Until the operation it was impossible to be sure of the diagnosis and the history and symptoms strongly suggested tuberculous mischief. Case 3, though not unique, is of great interest as it shows that even at birth pathological growths of so malignant a type may be met with. In conclusion, I beg to tender my thanks to the visiting staff through whose kindness I am permitted to make use of the above cases.

UNIVERSITY OF CAMBRIDGE.—SIR W. H Broadbent, K.C.V.O., F.R.S., has been appointed an elector to the Downing chair of Medicine; Professor E. A. Schäfer, F.R.S., an elector to the chair of Physiology; and Dr. J. F. Payne an elector to the chair of Pathology.—Downing College will hold an examination for Minor Scholarships in Natural Science on Tuesday, March 6th, and following days. Candidates are directed to apply for information to the tutor, Mr. H. Jackson.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Effects of Violet Infusion on Malignant Growths.

A MEETING of this society was held on Feb. 13th, Mr. A. PEARCE GOULD being in the chair.

Dr. WILLIAM GORDON read a paper on the Effects of Violet Infusion on Malignant Growths. He said that on March 18th, 1905, he had recorded in THE LANCET a case of presumably malignant disease which disappeared during treatment with infusion of violets. Since then, by the kindness of his colleagues and other medical men, he had been enabled to collect a considerable number of cases, some of which had come under his own observation, the rest being watched and described by others. The publication of these cases at the present time would, he hoped, serve two useful purposes. First, it would show the desirability of further inquiry into the action of the infusion, and might help to indicate the direction such an inquiry should take. Secondly, it would tend to correct the mistaken statements which had unfortunately been circulated in the periodical press. He said that he did not propose to discuss here the question of a "cure for cancer." No sensible person acquainted with medicine talked of a "cure" for malignant disease after only a few months of observation. But the results he had to record were remarkable and would probably be held to justify them being brought forward. In considering them it should be remembered (1) that the majority of the cases were already very advanced when submitted to treatment, and (2) that differences in the nature of the growths, in the organs affected, in the patient's constitution, as well as—not improbably—in the varieties of violet plants chosen, the soils they grew in, the way the leaves were used, and possibly even the season in which they were picked, might have helped to determine the differences in the effects. He then related a case of a man, aged 53 years, who had cancer of the tongue. He had been a healthy man and had had no venereal disease. Six months previously he thought that a sharp edge of tooth had hurt the left side of his tongue, and after a time he began to have pain which ran up to his left ear. Later still he had difficulty in opening his mouth. Two hæmorrhages, one to the extent of a pint, occurred recently. He had lost a stone in weight. There was a deep ragged ulcer on the left side of the tongue opposite the last molar tooth, with hard raised edges, very tender, bleeding on examination, and surrounded with much induration, which spread to the gum and anterior pillar of the fauces. No enlarged glands could be felt. He was seen by four surgeons, all of whom diagnosed cancer, and an immediate extensive operation was advised. A microscopical examination was not made because no occasion for it then existed. The patient refused to be operated on and treated himself at home with infusion of violets, beginning it on Nov. 10th, 1904. By Jan. 23rd, 1905—i.e., in about ten weeks—he was so much better that his employers sent him to show himself. The change was extraordinary. He looked well and had gained 32 pounds in weight. The pain had become trifling, he could open his mouth well and protrude his tongue almost naturally; the ulcer was much smaller, the hardness was less, the surrounding infiltration was greatly reduced, and there was no longer any tenderness or inclination to bleed. He said that during the first week of the treatment the pain had been worse but that after that it rapidly became less. On Feb. 20th, the treatment having been continued meanwhile, practically nothing was left of the ulcer but a local loss of substance in the side of the tongue and a narrow hard scar. There was only occasional slight pain. Since then he kept in excellent health, the scar remaining the same and the pain having ceased until December. He then discovered a small growth on the anterior pillar of the fauces at the left side, a little way behind the seat of the former ulcer. It was, however, painless. He was seen on Jan. 16th, 1906. The growth was small, was ulcerating and indurated, but there was little surrounding inflammation; no glands could be felt in the neck. He said that he was using the violet infusion as before and that the growth was no larger than when he found it a month ago. The record

case which came to Dr. Gordon's knowledge, and which was under the care of Mr. A. C. Bird of Sidmouth, was also not examined microscopically, for the same reason as in the first case. No doubt existed as to the nature of the disease when the question of operation was raised and no recovery apart from operation seemed possible. But in spite of the absence of microscopical confirmation it would probably be conceded that this case was a very important one. Syphilis of the tongue was a common enough disease and might sometimes closely simulate cancer, but syphilitic ulceration of the cervix uteri resembling cancer was a very rare disease, and considering the very careful examination which was carried out in this case it was scarcely conceivable that an error in diagnosis had been made. The patient, who was 52 years of age, began to suffer in January, 1903, from uterine pain and discharge. She had previously enjoyed good health. Her periods had ceased at 49 years. She had had 12 children and one miscarriage between the tenth and eleventh child. There had been no stillbirths. Eight children, including her eldest, are alive and well "so far as she knows." Early in 1903 she had a severe uterine hæmorrhage and this was repeated later in the year. Mr. Bird examined her in September, 1903, and found a condition which he diagnosed as malignant ulceration of the cervix. The discharge was then sanguineous and offensive and digital examination caused bleeding. The glands were enlarged in the left groin. The patient had lost flesh and looked cachectic, her appetite was bad, and there was frequent sickness. As she was bleeding when he saw her Mr. Bird put her on an ergot mixture and ordered hot creolin injections each night. When she was fit to travel he sent her to the Great Northern Central Hospital in London, under the care of Dr. G. F. Blacker, who kindly sent the note dictated at the time. The note was as follows: "Examined under an anæsthetic. *Nil* in abdomen. Per vaginam cervix (vaginal portion) has almost disappeared and there is an ulcer invading it and the posterior wall of the vagina. The tissue of the ulcer breaks down readily and bleeds easily. It is evidently a malignant ulcer. The anterior lip of the cervix is still comparatively intact. Vagina has undergone some senile changes. Uterus appears fairly moveable. Per rectum, thickening felt in right utero-sacral ligament and the ligament is shortened. Left utero-sacral ligament is also thickened and shortened. Growth can apparently be traced out from cervix into the utero-sacral ligaments. Considered inoperable therefore." The patient returned home and soon after, about the end of October, 1903, on the advice of a lady in Sidmouth, began to treat herself with infusion of violets under Mr. Bird's supervision. Every day about 30 fresh violet leaves were washed with cold water, placed in a jug, and a pint of boiling water was poured on them. After 20 minutes the water was poured off and taken internally in the next 24 hours. At the same time, by Mr. Bird's advice, she used hot creolin vaginal injections (a drachm to the pint) each night and took a drachm of Scott's emulsion thrice daily after food. In a week "she felt better," in two months the discharge ceased to be sanguineous, and in six months all pain had left her. She went on with the treatment up to January, 1905, with occasional breaks of a month. During the breaks she said she missed her medicine. No unpleasant symptoms were caused. No considerable hæmorrhage occurred again. No slough seemed to have come away. When seen on March 21st, 1905, with Mr. Bird she was a healthy-looking woman without a trace of cachexia, fairly well nourished, but easily tired, although stronger than she had been during her illness. She had no pain or bleeding, the slight vaginal discharge was not at all offensive (creolin injections were still used), her feet, which used to swell, no longer did so, and she was never sick. Her pulse was good, a little tense perhaps. The abdomen was thin and wrinkled but no pelvic growth could be made out by palpation. There were no abnormally large glands in either groin. Per vaginam, the cervix had vanished, being replaced by a dimple from which cicatricial bands radiated; nothing could be felt resembling a growth or an ulcer. There was no trace of fœtor and ordinary examination caused no bleeding. More forcible examination did cause slight bleeding. Per rectum the womb was difficult to make out, seeming curiously contracted. No infiltration or growth could be felt anywhere. She discontinued the infusion at the beginning of September but there had been no return of symptoms. She was well when seen in January, 1906. The doubt about the nature of these two cases arose solely from the fact of the disappearance of the disease. The next case, however, which was under the care of Mr. H. V. Rake of Fordingbridge, near Salisbury, in which the growth greatly diminished, was one in which the diagnosis was supported by microscopical examination. The patient was a man, aged 63 years, who began to complain of soreness of his tongue in January, 1905. He had had a patch of leucoplakia on the left side of his tongue for seven years and about two years ago had had a "well-marked syphilitic eruption" of copper-coloured spots on the right arm. Mr. Rake diagnosed cancer of the tongue and sent him to Salisbury Infirmary where the diagnosis was confirmed and immediate operation was advised. Mr. Rake saw him afterwards on March 16th. He was then pale and ill-looking, the speech was thick, the breath was highly offensive, and there was a hard lump in the left side of the tongue about its middle, just in front of the patch of leucoplakia, covering an area of the size of a shilling, with infiltration of the floor of the mouth, rising to a level with the teeth and fixing the tongue. There were also some glands below the jaw on the left side. The patient refused operation. Infusion of violets was now begun. During the first week of the violet treatment the pain, which had been moderate, became much worse, but afterwards was greatly relieved. The offensiveness of the breath soon became less. A piece of the growth was removed for microscopical examination and pronounced to be epitheliomatous. The patient steadily improved and on July 6th he was a healthy-looking man. His mouth could be opened widely and the tongue easily and fully protruded. On the left side, about half-way along the tongue and just in front of a white patch of leucoplakia, a hard smooth surface about an inch in length and half an inch broad was all that was left of the growth already described. There were a few small glands in the neck. In August, 1905, the growth again became larger and at the end of the year was removed, the disease being far advanced. In this case the reduction, which occurred up to July, in the size of the growth was very striking, but it had been suggested that the infusion only affected inflammatory swelling, perhaps of specific origin, and that the cancer (if cancer it was) remained, minus the inflammation. This was, of course, a very reasonable suggestion, but it could not, Dr. Gordon said, apply to the next case which was under the care of Mr. Russell Coombe and Dr. Gordon, in which there could be no doubt that the tissues which broke down during the administration of the infusion were cancerous and not merely inflammatory. The patient was a man, aged 45 years, and came under the care of Mr. Coombe last March at the Exeter Dispensary. He had then an extensive growth involving the left side of the tongue, the floor of the mouth, and the jaw, appearing externally as two large red bosses on the chin. He dated it from August, 1904. There were profuse salivation and very fœtid breath. He was very cachectic. Infusion of violet leaves was given at the end of March. In two weeks the cachexia was less but the centre of the external growth in the skin was sloughing and looked as if "melting out." This sloughing process went on quickly and it seemed as if the whole cancer might be about to come away. The opening led right through the bone into the mouth, so that the movements of the tongue could be seen through it. A piece of the breaking-down tissue was microscopically examined by Dr. R. V. Solly and found to be epithelioma. That the breaking down was not merely coincident with the violet treatment but a consequence of it seemed clear, partly from its unusual character, partly from its following so closely on the commencement of the infusion, and partly from the results of an unfortunate circumstance which perhaps prevented the disappearance then beginning to be hoped for—namely, that the patient became careless and neglected his treatment. In about two weeks the growth had sprouted up again so as almost to fill the opening made by its breaking down. He was now taken into hospital, where once more the breaking-down process set in, the opening became wider, and the peripheral part of the growth began to shrink and flatten. The patient began to open his mouth more widely, to move his tongue, and almost to speak intelligibly. He had now no pain, which, before treatment, had been troublesome. In spite, however, of persistent treatment, the growth spread at its margin and the glands became involved, so that Dr. Gordon was obliged to discharge him as hopeless. It should

be noted that this case was alcoholic and it was possible that in alcoholic subjects the violet infusion might be less useful than in others. The importance of this case depended on the evidence it afforded that violet infusion could definitely affect cancerous tissue. These four cases seemed to Dr. Gordon to form a remarkable series. Two growths with all the appearance and characters of cancer disappeared and the only doubt of their nature arose from this disappearance. One of them recurred. A third case, with the microscopical as well as the general appearance of cancer, greatly diminished in size (although only for a time), whilst the fourth case indicated that the infusion could act definitely on actual cancerous tissue. Dr. Gordon then proceeded to give briefer clinical details of 43 more cases, making 47 in all. He then dealt with the mode of using the infusion. In most of the recorded cases the infusion had been used both locally and internally. About 50 good-sized freshly picked garden-grown violet leaves with their stalks (the "Princess of Wales" variety was used in Case 1) were put in a jug and a pint of boiling water was poured on them. The jug was set aside in a cool place for 12 hours, say overnight, and then the green liquid was strained off. Half of this liquid was taken internally, either at once or in divided doses during the day. The other half was used to make fomentations or other local applications adapted to the seat of the cancer. This must be done daily as a regular routine for months. Sometimes larger doses of the infusion or a stronger infusion had been given. Sometimes a shorter, sometimes a longer, period of soakage had been used in the preparation of it. In one case a glucoside from the leaves had been used instead. Large doses must be watched, as they might cause unpleasant symptoms. The local treatment of breast cancer was by fomentations or even poultices of the leaves. That of mouth cancer was by frequent gargling with the infusion. That of rectal and uterine cases was by local injections of it. The infusion had in some cases given rise to anorexia, diarrhœa, temporary increase of pain, rash, shortness of breath, and faintness. It was suggested that the glucoside might prove to be the active principle of the infusion. In conclusion he said: 1. The drug *properly supervised* was not dangerous. 2. It had a definite influence on malignant growths in some cases. 3. Pain was sometimes remarkably relieved. 4. Fœtor was sometimes remarkably lessened. 5. The general condition was sometimes remarkably improved. 6. Sometimes the growth was wholly unaffected. 7. Sometimes it became (sometimes temporarily) arrested. 8. Sometimes it became reduced in size. This might be only temporary. 9. If the growth was extensive the drug had seemed unable to check it. 10. After a time the drug had sometimes seemed to lose its effect. 11. Some small growths had even disappeared, but the cases of this were very few so far and the nature of some was open to question. 12. It would be utterly unjustifiable to advise this treatment as a substitute for possible operation according to present experience. 13. It was desirable to try it after operation to ascertain if it could reduce the frequency of recurrence. 14. It was desirable to try it in inoperable cases to ascertain: (*a*) if it could cause disappearance of the growth; (*b*) if it could bring the growth within the reach of operation; and (*c*) if it could at least alleviate symptoms. 15. It was desirable that all cases should, when possible, be examined microscopically when so treated. 16. It was possible that the glucoside was the chief active principle of the leaves.

MR. PEARCE GOULD said that this subject was one to be approached with great caution, for it was beset with many difficulties. In the first place a sharp line of distinction must be drawn between those cases which were improved by the relief of their symptoms and those in which an actual reduction in the size of the growth took place, and the improvement in the relief of symptoms should not be allowed to obscure the aspect of the case. Secondly, it was most difficult to discuss the treatment of a disease which under natural conditions ran such a varied course. He could, he thought, parallel nearly every case which had been quoted in the paper from a selection of cases in which there had been no treatment whatever. Arrests of malignant growths were familiar to all and the rapidity of growth often altered in a striking manner; an active scirrhus of the breast might become atrophic. Passing to the cases quoted in the paper he doubted if the first case was in fact a case of cancer, for although the disease was extensive and ulceration was present yet the glands were not enlarged. In the second case, again, in which there was ulceration of the posterior lip of the cervix, he also was in doubt, for the distribution of the disease as described was certainly unusual. Such cases raised the question whether it was possible to diagnose a case of cancer by the clinical features alone. Even in Dr. Gordon's third case, in which there was a microscopical examination of the growth, there were certain features which made him doubt if it was a case of cancer. When it was remembered that until quite recently actinomycosis had been confused with cancer, it was quite possible that there were some conditions which were not even yet recognised and which might be mistaken for cancer. He had tried infusion of violets in the Middlesex Hospital but without success. In one case of cancer of the breast with a sloughing ulcer the growth had diminished in size and the ulcer cleaned up, but no further improvement took place. His opinion was that there was something in violet leaves which did tend sometimes to relieve certain cases of cancer.

DR. NORMAN MOORE said that he entirely agreed with the last speaker that the first two cases quoted in the paper were not cases of cancer and could not be used in a scientific discussion of the subject. He would agree also with Mr. Pearce Gould that they ought not to presume that they were acquainted with every form of cancer, for it was but a comparatively short time that they had been able to recognise the variations in the characters of new growths. Further, he did not think it was possible to say from the microscopical characters alone whether a growth was malignant; such characters must be considered in connexion with the history and clinical course of the disease. With regard to the case of annular growth of the rectum quoted in the paper he doubted whether that was carcinomatous. The growth recurred at the anus and in his experience it was quite exceptional for a malignant growth to recur at another point in the alimentary canal. He then alluded to the small amount of pain from which a patient with extensive malignant disease might suffer; pain when present was the consequence of pressure or inflammation. For this reason, therefore, he could not agree that the relief of pain was any indication of improvement. He recalled many cases of cancer of the œsophagus in which great improvement had taken place by proper feeding in hospital and yet the growth had not been in any way arrested. The variations in the rate of growth in cases of cancer were well known. The cases quoted in the paper did but illustrate the natural course of the disease and he attached no therapeutic importance to the remedy used.

MR. T. J. FAULDER asked whether any palliative measures had been applied, especially in the cases of cancer of the rectum, for it was well known that considerable improvement often took place. After colotomy a seemingly inoperable cancer might become operable.

MR. L. S. DUDGEON asked whether the effects of infusion of violets had been tried in inflammatory conditions. He mentioned a case in which inflammatory tissue had formed a very considerable portion of an apparently large malignant growth.

DR. GORDON replied.

MEDICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on Feb. 12th, MR. CHARTERS J. SYMONDS, one of the Vice-Presidents, being in the chair.

DR. J. PORTER PARKINSON showed a woman, aged 46 years, who was suffering from Adiposis Dolorosa affecting both arms which measured 14½ inches in circumference and were painful and tender when touched. She had an alcoholic history, slight signs of pulmonary tuberculosis, early hepatic cirrhosis, and traces of albumin and sugar in the urine. The thyroid gland could not be felt and it was proposed to adopt treatment by thyroid extract. The adiposis was of five years' duration.

DR. PARKINSON also exhibited a case of Sporadic Cretinism which had been under treatment for five years. The patient, a female, was now eight and a half years old and 3 feet 10½ inches in height; she was fairly intelligent, being able to read a few words and to count, but was still in the infants' class at school. When first seen she was a marked example of cretinism both in intelligence and conformation but had made great improvement under one and a

half grains of thyroid extract administered regularly thrice daily.

Dr. F. PARKES WEBER exhibited a case of Stokes-Adams Disorder in a man, aged 56 years. The principal symptoms had been bradycardia and recurrent syncopal attacks. There existed considerable cardiac hypertrophy but no evidences of valvular lesion. The pulse averaged 42.—Dr. F. DE HAVILLAND HALL remarked that cases exhibiting this group of symptoms seemed to be more common than was formerly supposed. He divided such cases into those accompanied by attacks of vertigo, those with epileptiform attacks, and those with pseudo-comatose attacks. There was usually well-marked arterio-sclerosis associated with a very slow pulse.—Dr. C. W. CHAPMAN remarked that the condition occurred sometimes in younger subjects, as in the case of a man, aged 32 years, under his care.—Dr. ALEXANDER MORISON discussed the various theories suggested to explain the symptoms, and expressed the view that a disorder of the auriculo-ventricular bundles of His hardly explained all the facts.—Dr. J. F. H. BROADBENT thought that cases of Stokes-Adams' disease with arterial sclerosis should be separated from those not so attended—cases, for instance, which followed influenza, mostly in younger subjects.

Dr. WEBER also exhibited two cases of Splenic Enlargement of uncertain origin in two boys, brothers, aged 13 and 10 years respectively.

Mr. FREDERIC BARKER exhibited for Dr. LEONARD G. GUTHRIE a woman, aged 28 years, who presented some of the symptoms of Tabes Dorsalis. She had been ailing about two and a half years and exhibited the Argyll-Robertson and other pupillary changes characteristic of the disorder and had presented some of the sensory changes. The patellar reflexes had at one time been absent but lately they had returned and slight oscillations in the ocular movements raised the question of insular sclerosis, though muscular tremor was absent. Possibly insular sclerosis had affected the posterior columns and the afferent sensory tracts.

Mr. SYMONDS exhibited a woman, now aged 25 years, in whom a Myeloid Sarcoma had been removed from the left lower jaw nine years ago. The patient had a good jaw which carried a serviceable denture and showed no recurrence.—Mr. CUTHBERT S. WALLACE referred to a somewhat similar case of myeloid fibroma where recurrence had occurred nine months later and the patient died soon afterwards.

Mr. SYMONDS also showed a boy, aged 15 years, who had suffered an Extracapsular Fracture of the Neck of the Femur. He was able to walk immediately after the accident and came under treatment for lameness. The skiagram showed typical extracapsular fracture with impaction. Some three months after the accident the neck was chiselled through in the line of fracture and the femur was drawn down. Distinct improvement took place in the axis of the limb, while the movements of the hip-joint remained perfect and the patient could walk without limping.—Mr. A. E. J. BARKER referred to a somewhat similar case.

Mr. SYMONDS also exhibited a man, aged 20 years, with Multiple Exostoses—in all some 90 growths had been counted. The largest, attached to the tibia, was removed as it was causing interference with the knee-joint. The patient also showed congenital absence of the lower end of the ulna with curvature of the radius. Skiagrams showing the condition were exhibited.

Mr. F. C. WALLIS exhibited a case of Dislocation backwards of the Ankle with Fracture of the External Malleolus in a woman, aged 47 years, who had fallen down a bank four feet high about two months before admission to Charing Cross Hospital. An x ray photograph showed a fractured fibula with the lower fragment displaced forwards and in contact with the lower end of the upper fragment; there was also a backward dislocation of the ankle. An operation was performed on Jan. 15th, 1905, and the condition of matters had greatly improved.—Mr. SYMONDS referred to a similar case in which he had been obliged to remove part of the fibula.

Mr. WALLIS also showed a case of Fracture at the Surgical Neck of the Humerus, which had been united by staples 14 days after the injury, in a man, aged 25 years.—Mr. SYMONDS congratulated Mr. Wallis on the novelty and success of his method.

Mr. J. HUTCHINSON, jun., showed a case of a rare disease described as Lymphodermia Perniciosa by Kaposi. The patient, a man, aged 51 years, who had never been out of England, developed lymphatic thickening of the face and neck, the onset being somewhat acute. Vesicles were present, as well as solid œdema of both forearms and "nodes" on the forehead and phalanges of the hand. The condition was spreading and "infective" but no micro-organisms were present in the lymph from the vesicles nor was there leucocytosis. At first the disease was taken for erysipelas but the absence of fever and the subsequent progress showed that it was entirely different. Arsenic had been found in this case to check the progress of the disease.—Dr. WEBER discussed the case and suggested that it might be a case of leukæmia beginning in the skin.

Mr. BARKER exhibited a case of Recurrent Dislocation of the Shoulder in a man, aged 25 years.

Mr. S. MAYNARD SMITH exhibited a case of Suppuration in the Thyroid Gland in a woman, aged 43 years. She had noticed a swelling in the neck for the first time nine months before. The swelling was in the middle line of the neck and of about the size of a walnut. This rapidly increased in size and about three months ago it pointed "like an abscess" and was opened. It was said that gummy material and pus were evacuated. There was no history of syphilis; she had had one child, now alive and well, and no miscarriages.—Mr. JAMES BERRY commented on the rarity of such cases. He did not regard the present case as of either syphilitic or tuberculous origin.—Mr. BARKER suggested suppuration of lymphatic glands adjacent to the thyroid as the origin of the trouble.—Mr. SYMONDS had only seen one case of syphilitic suppuration of the thyroid.—Dr. W. H. KELSON believed tuberculous disease occurred in that position.

Mr. MAYNARD SMITH also exhibited a case of Amputation of the Penis for Epithelioma arising at the Orifice of a Urinary Fistula.

Dr. LEWIS A. SMITH exhibited a case of Recurrent Third Nerve Paralysis in a single woman, aged 30 years. She was quite well up to the age of seven years, when she had enteric fever and had never been strong since. At the age of 14 years she was suddenly attacked with right third nerve paralysis and she had had similar attacks at the age of 18 years and 25 years, recovering on each occasion in a few weeks. The present attack began three weeks ago with sudden right hemicrania and vomiting. The right eyelid "dropped" on the third day and there was complete paralysis of the third nerve on the right side as it existed at the present time.—Mr. HUTCHINSON and Dr. J. S. RISIEN RUSSELL discussed the case and remarked on the rarity of the condition; but Dr. SMITH believed that 25 such cases had been recorded.

CLINICAL SOCIETY OF LONDON.

The Surgical Treatment of Cancer of the Stomach.

A MEETING of this society was held on Feb. 9th, Mr. H. H. CLUTTON, the President, being in the chair.

Mr. B. G. A. MOYNIHAN (Leeds) read a paper on the Surgical Treatment of Carcinoma of the Stomach based on the records of 59 operations for this condition during the last few years. The operations performed were: gastro-enterostomy, 35 cases with five deaths; gastrectomy, ten cases with three deaths; gastrostomy, five cases with no deaths; jejunostomy, three cases with no deaths; and exploratory laparotomy, six cases with one death. Dealing first with gastro-enterostomy, he considered that this operation was indicated in cases with an irremoveable growth causing pyloric obstruction; but where there was no obstruction to the outlet of the stomach the operation did not give relief commensurate with its risks. He had found that, in suitable cases, gastro-enterostomy prolonged the patients' lives and allowed them to spend their last weeks or months in tolerable comfort. With regard to gastrectomy, he was convinced that modern improvements in technique had rendered the radical operation applicable to a wider range of cases than formerly, not only as a means of complete cure but as an operation to be undertaken deliberately in preference to gastro-enterostomy as a palliative measure. In five cases where the growth had caused obstruction at the cardiac end of the stomach Mr. Moynihan had performed gastrostomy, adopting Senn's method in four cases and Frank's method in one. Jejunostomy was adapted to those cases in which gastro-enterostomy was impossible by reason of the extensive involvement of the

stomach and where gastrectomy was contra-indicated by the presence of secondary deposits. It was chiefly of importance when the prolongation of life, for even a brief time, was of great moment. He deprecated the prevalent opinion that an exploratory laparotomy "to confirm the diagnosis" was devoid of risk. Cases where the diagnosis was in need of operative confirmation were those where close scrutiny and handling of the parts were necessary; where the condition could be recognised by merely inserting a finger within the abdomen the clinical diagnosis as a rule required no corroboration. Mr. Moynihan drew attention to the frequent incidence of cancer at the pyloric end of the stomach and to the regular invasion of the curvatures, both these facts being well brought out in his series. Between the pyloric and pre-pyloric forms of growth he believed that a diagnosis was often possible by careful attention to the onward march of symptoms. As bearing on the frequency of malignant transformation of simple ulcer, he had found that out of 39 cases of carcinoma of the stomach where attention was directed to this point 24 gave a previous history indicative of gastric ulcer. He noted the fact that both ulcer and cancer affected the same portion of the stomach wall and he was inclined to assume that a chronic inflammatory condition frequently preceded the cancerous stage in the stomach as in other parts of the body. He believed that the discouraging results of the surgical treatment of gastric carcinoma were due to the fact that the insidious onset of the disease rendered early diagnosis far from easy, but he hoped that in the future by a careful application of clinical methods and a wider recognition of early symptoms the surgeon would be more often called upon to explore in order to make a diagnosis rather than to confirm one arrived at by waiting until too late.

The PRESIDENT commented on the large number of cases of carcinoma of the stomach dealt with by the surgeons of Leeds as compared with those seen by surgeons in London.

Mr. A. W. MAYO ROBSON referred to a paper that he had published on the Importance of an Early Diagnosis of Cancer of the Stomach,[1] in which he had expressed views coinciding with those of Mr. Moynihan. Mr. Robson had performed 120 operations on the stomach for cancer and 80 of these had been performed during the past ten years since the technique of gastric surgery had been brought nearer to perfection. He laid stress on the fact that cancer of the stomach, like carcinoma elsewhere, was at first a local disease, hence it followed that an early diagnosis was of prime importance. Whenever a patient at or after middle life complained of gastric symptoms accompanied by loss of weight and by anæmia, which failed to yield to treatment within a few weeks, the possibility of cancer of the stomach should be recognised and a surgical consultation held with a view to clearing up the diagnosis by laparotomy, an operation which at an early period of the disease was almost devoid of risk. Of ten cases in which he had performed partial gastrectomy for cancer eight had recovered, and of these one was living and well six years later, one five years, one three and a half years, and one two years; one had recurrence after four and a quarter years of good health, and one after two years. Two had only lived eight and three months respectively. Even if the disease proved too extensive for removal a posterior gastro-enterostomy was capable of giving great relief and that with a very small risk, for out of 26 posterior gastro-enterostomies which he had performed for cancer during the past ten years 25 had recovered and lived for considerable periods or were living at the present time. Of these one lived over three years and was then operated on again as the growth had invaded the new opening; one was living four years later, and another three and a half years later; one had a gastrectomy after gastro-enterostomy and lived for two years; one was living and well one and a half years after; one lived a year and then had another operation as the new opening was becoming invaded by the growth; one was living and well now, a year later, and another eight months; one lived 12 months; three lived 11 months; others lived eight months, four months, and three months respectively; the remainder were living but had only been operated on within a few months, excepting one who had succumbed to hæmatemesis in the second month after operation. The relief in these cases was a very real one so long as the new opening remained free from obstruction by disease. Even where the disease was too extensive for gastro-enterostomy the operation of jejunostomy by the method which Mr. Robson had described at the Royal Medical and Chirurgical Society on April 11th, 1905, might prolong life for a considerable period. In one case a patient had lived for 12 months (10 or 11 months in comfort) and in another the patient was living eight months after operation, yet in both of these cases every inch of the stomach appeared at the time to be the seat of cancer. When the disease was at the cardiac end of the stomach and irremoveable a gastrostomy ought to be performed with very little risk, as out of 19 cases 18 had recovered and lived for varying periods, two of them over a year. Mr. Robson also referred to the fact that in a number of cases presenting every appearance of cancer, both in the character of the tumour and in glandular involvement, a gastro-enterostomy had been followed by apparent cure, as the patients were well years later, one nine years and others several years. These cases, he believed, were simple inflammatory tumours around chronic ulcers and he thought such cases accounted for some of the supposed cures by various methods, such as injections of drugs and serums. Referring to the predisposing influence of chronic ulcer of the stomach to cancer he mentioned that in 59·3 per cent. of cases of cancer of the stomach on which he had operated the long history of painful dyspepsia suggested the possibility of ulcer having preceded the onset of malignant disease.

Mr. LEONARD A. BIDWELL advocated the performance of an exploratory laparotomy at one time and a gastro-enterostomy later, after two weeks' interval. The last five cases he had performed in this way had been perfectly successful, although one case died seven weeks later from hæmatemesis due to new ulcers which had formed in the stomach at some distance from the sutures. For cancer of the cardiac end he had found Mr. Charters Symonds's tubes gave better results than gastrostomy.

Dr. F. DE HAVILLAND HALL emphasised the importance of early diagnosis and advised an early surgical consultation. In patients over 50 years of age who were the subjects of anæmia gastric cancer should always be suspected.

Dr. A. E. GARROD recalled the fact that the late Dr. Andrew used to say that many of the cases diagnosed as pernicious anæmia turned out to be cases of cancer of the stomach.

Dr. JOHN FAWCETT was doubtful about the alleged importance of gastric ulcer as a precursor to cancer. It was not supported by an analysis of the records of Guy's Hospital. Unfortunately, the diagnosis of both complaints was obscure. Carcinoma of the cardiac end often started in the stomach, as shown by the histological examination and not in the œsophagus, as was more commonly believed.

Mr. JAMES BERRY, referring to the technique of operation, asked Mr. Moynihan whether he performed gastrectomy without a previous gastro-enterostomy or whether he was in the habit of performing an entero-anastomosis at the same time. He (Mr. Berry) approved the use of clamps.

Dr. A. E. T. LONGHURST was glad to hear that cancer was a local disease. He also emphasised the importance of early investigation and diagnosis.

Mr. F. S. EVE asked what was the usual practice in regard to enlarged glands at the back of the abdomen which were frequently inflammatory and not malignant. He agreed that carcinoma in the pre-pyloric portion of the stomach sometimes gave rise to symptoms resembling pyloric cancer. The clinical evidences of cancer having been preceded by simple ulcer were not very convincing.

Mr. G. H. MAKINS thought that the value claimed for gastro-enterostomy should be discounted by the discomfort suffered by the patients after operation and for several months before their death. The duration of life, which was rarely longer than a year, might be a simple, but it was not always an accurate, test of success.

Mr. MOYNIHAN, in reply, said that it would be well if the practice that obtained in the north of sending gastric cases to the physician only if a surgeon considered operation inadvisable were introduced into London. He always removed the growth straight away whenever possible without a preliminary gastro-enterostomy. As to the question of ulcer in the etiology of cancer, in over 50 per cent. of his cases ulcer had been diagnosed by the medical attendant years before the cancerous condition developed. In his opinion chronic dyspepsia was often due to ulcer, vomiting was infrequent in this condition, and hæmatemesis rarer still. He regarded

[1] Brit. Med. Jour., April 25th, 1903.

hospital records as quite worthless unless the point under discussion had been specially looked for. He never performed entero-anastomosis, as in his operation this was quite impossible, the upper end of the opening being over an inch below the duodeno-jejunal flexure. He always used clamps and was convinced of the saving in time effected by them. He removed all glands whether they were obviously cancerous or not.

OBSTETRICAL SOCIETY OF LONDON.

Ovariotomy during Labour.—Exhibition of Cases and Specimens.

A MEETING of this society was held on Feb. 7th, Dr. W. R. DAKIN, the President, being in the chair.

Dr. HERBERT R. SPENCER recorded the case of a woman, aged 24 years, on whom he had performed Ovariotomy during Labour when a little over eight months pregnant with her first child. The cyst had been tapped three weeks previously. At the operation extensive adhesions were found both to the abdominal wall in the neighbourhood of the puncture and to the omentum at the upper part of the cyst. The tumour was a thin-walled cyst of the left ovary. It was multilocular and had ruptured at the lower part, allowing fluid to escape into the peritoneal cavity. Strong labour pains had set in an hour before the operation. After the operation was over the cervix was found to be dilated fully and the head was low down in the pelvis. A female child, weighing six pounds ten ounces, was delivered by forceps and the placenta a few minutes later. There was no post-partum hæmorrhage. Mother and child recovered well, the mother suckling her infant. Dr. Spencer strongly condemned the tapping of ovarian cysts unless they were undoubtedly malignant or unless the patient was suffering acutely from some pulmonary affection or grave disease independent of the tumour. He discussed the treatment to be adopted when a woman is in labour with a large ovarian tumour which does not obstruct the pelvis. Owing to the dangers incidental to rupture of the tumour such cases needed prompt treatment. There were three alternatives: (1) to deliver by the natural passage, dilating the canal if necessary, and then to perform ovariotomy; (2) to perform ovariotomy and to leave the delivery to nature; and (3) to perform ovariotomy at the end of the first stage of labour and immediately afterwards to deliver by forceps while the patient was under the anæsthetic. In suitable circumstances the two operations might with advantage be performed simultaneously. Each of these three methods might properly be performed and possessed special advantages in particular circumstances—the first in avoiding the injurious effects of the anæsthetic on the fœtus and in facilitating the operation of ovariotomy and the ligation of the pedicle; the second in avoiding the maternal and fœtal injuries which were so common with instrumental deliveries; and the third, of which the case here recorded is an example, in that the patient was delivered of her child and her tumour while under the same anæsthetic. The ovariotomy could usually be performed with more complete asepsis just before delivery and the risk of rupture of the large cyst during the expulsive pains was lessened.—Dr. G. E. HERMAN said that he agreed with the main contentions put forward by Dr. Spencer.

Dr. HEYWOOD SMITH showed a Radiograph taken in the thirty-sixth week of utero-gestation. He considered that such photographs might prove of great service in determining the presence of twins, or varieties of presentation, besides any deformity of the pelvis.

Dr. JOHN PHILLIPS showed a specimen removed by vaginal hysterectomy from a woman, aged 21 years, on account of recurrent bleeding for three months following a hydatidiform mole. By digital exploration of the uterus a softish flattened swelling, of the size of a bean, was detected high up on the posterior wall of the uterus. A small piece which was removed for examination proved it to be chorion-epithelioma. Some febrile symptoms occurred during the first fortnight after operation but complete recovery followed. The patient had remained well for a year.—Dr. C. J. CULLINGWORTH expressed the hope that the history of the case would be supplemented after the lapse of another 12 or 18 months.—Mr. J. D. MALCOLM mentioned that in a case which he had reported in conjunction with Dr. Cuthbert Lockyer and Dr. R. Hamilton Bell the patient was alive and well four years and seven months after the operation.

The PRESIDENT then delivered the annual address.

The following are the officers and the members of the council for 1906:—President: Dr. W. R. Dakin. Vice-Presidents: Dr. Montagu Handfield-Jones, Dr. Amand Routh, Sir William Japp Sinclair, and Mr. Albert C. Butler-Smythe. Treasurer: Dr. George Ernest Herman. Editor of Transactions: Dr. Herbert R. Spencer. Honorary Secretaries: Dr. Robert Boxall and Dr. Arthur H. N. Lewers. Honorary Librarian: Dr. William John Gow. Other Members of Council: Dr. Henry Russell Andrews, Dr. Charles James Cullingworth, Mr. Ernest Rumley Dawson, Dr. George Eastes, Dr. Thomas W. Eden, Mr. John Henry Ewart, Dr. John Shields Fairbairn, Mr. William Sampson Handley, Dr. John Benjamin Hellier, Dr. John Martin Munro Kerr, Dr. Arnold W. W. Lea, Dr. Cuthbert Lockyer, Dr. John Phillips, Dr. Charles Hubert Roberts, Dr. Mary Ann Dacomb Scharlieb, Dr. Walter C. Swayne, Mr. James Henry Targett, and Dr. Thomas Wilson.

OPHTHALMOLOGICAL SOCIETY.

Exhibition of Cases and Specimens.

A CLINICAL meeting of this society was held on Feb. 8th, Mr. CHARLES J. OLDHAM, Vice-President, being in the chair.

Mr. ARNOLD LAWSON and Mr. GEORGE COATS showed preparations from a case of Congenital Anterior Staphyloma previously brought before the society by Mr. Lawson. The eye had spontaneously ruptured six weeks later. The central portion of the cornea was thinned and had a cicatricial appearance. The cornea was perforated with a knuckle of retina caught in it. The lens capsule and iris were adherent to the back of the cornea. Owing to stretching the ciliary processes, pars plana, ora serrata, and anterior part of the choroid were carried forwards with the cornea. Owing to the firmer attachment of the ciliary body to the sclera this had been left in its normal position. Thus the ciliary processes were further forwards than the termination of Descemet's membrane and the ora serrata was actually in front of the ciliary muscle. Only one other case of the kind had been described similar to this one. The reason of this displacement was due to the fact that in fœtal life the inner layers of the uvea were less intimately connected with the outer than is the case after birth, and the same occurs in many of the lower animals, especially in birds. The staphyloma in this case was believed to be due certainly to intra-uterine inflammation and perforation of the cornea.

Mr. W. T. HOLMES SPICER showed a patient, aged 48 years, who had always been short-sighted. The left eye had been blind ever since an injury he had received 30 years ago and the right eye failed in 1901 and now showed total posterior synechiæ and vision was entirely lost. The left eye had a corneal opacity and tremulous iris, the lens was tilted and slightly dislocated backwards, it was quite opaque, and there was no fundus reflex. Vision equalled perception of light and the projection was good. On March 3rd, 1903, a needle was introduced behind the ciliary body and the lens was pushed backwards. Sight was at once obtained and it had since improved, so that he was now able to see $\frac{6}{36}$. There was a large area of myopic atrophy of the choroid about the disc and the shrunken lens was visible at the bottom of the vitreous.

Mr. SPICER also showed a case of Superficial Punctate Deposit on the Cornea. The patient was a girl, aged 16 years, whose right eye was attacked with interstitial keratitis in 1897. She became deaf in 1902 and she had an attack of interstitial keratitis in the left eye in 1905. The latter was severe and led to much opacity and to the development of salmon patches in two places and a deposit of keratitis punctata at the back of the cornea. The left cornea had cleared considerably; there were some deep opacity near the centre and numerous small brown or dirty white dots, exactly like keratitis punctata, but they were evidently close to the surface and in front of the old interstitial opacity.

Mr. LUDFORD COOPER showed a girl, aged 11 years, suffering from Elephantiasis Neuromatosis. There was much deformity of the right upper eyelid and temporal region. The lid was pendulous and all its structures were greatly hypertrophied. The lid was also considerably everted. The patient was unable to lift it and it could with difficulty be raised so that the small shrunken globe beneath it could

be seen. The lens was opaque but the tension was normal. The outer and lower portions of the frontal bone and of the squamous portion of the temporal bone were much more prominent on the affected side. The condition was congenital and was slowly increasing.

Mr. E. E. HENDERSON showed a woman, aged 29 years, who had a growth on the Upper Palpebral Conjunctiva. For several weeks she had noticed something moveable beneath her upper lid and for three days it had protruded. An oval mass was found about 2·5 centimetres long and 1 centimetre broad. Its surface was smooth and vascular and it was attached to the fornix by a strip of conjunctiva containing vessels. It was thought to be tuberculous.

Mr. SYDNEY STEPHENSON showed a boy, aged nine years, who had Two Detachments of the Retina in One Eye one above and the other below. The tension was increased and the vision was bare perception of light. Transillumination showed that light passed readily through both detachments. The other eye was myopic, with some vitreous opacities. There were an obscure history of injury and a doubtful history of tubercle in the family. The question was one of diagnosis, though it was considered to be of a tuberculous nature by Mr. Stephenson

Mr. H. H. B. CUNNINGHAM showed a girl, aged five years, whose sight was noticed to be defective at school. In both eyes the lens was luxated, but more distinctly in the right. There was no coloboma in either iris or choroid. The right eye was myopic, about 8 D., and the left about 3 D., with some astigmatism in both.

Mr. A. STANFORD MORTON showed the drawing of a case of Staphyloma Posticum Verum (Weiss).

Mr. E. TREACHER COLLINS showed a case of Coloboma of the Iris, with a Bridge across it.

Mr. ARNOLD LAWSON and Dr. G. A. SUTHERLAND showed two cases. In one of them there was Persistent Œdema of Both Eyelids and the other showed a Divergent Strabismus with Associated Lid Movements.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—Rectal Alimentation.—Treatment of Acute Inflammation by Passive Congestion.

A MEETING of this society was held on Feb. 7th, Dr. J. O. AFFLECK, the President, being in the chair.

Dr. W. ALLAN JAMIESON exhibited a case of Extra-genital Chancre. It occurred on the chin of a young woman. The submaxillary and cervical glands were enlarged and a macular rash appeared on the body. There was a history of two months' duration and the patient admitted having been kissed.

Dr. NORMAN WALKER showed a boy, aged five years, suffering from Melanoma.

Mr. J. M. COTTERILL showed (1) Fibro-sarcoma of the Eighth Nerve removed from the Cerebello-pontine Angle (a large part of the cerebellum removed for the purpose of exposing the growth was also shown); and (2), (3), and (4) specimens of Enlarged Prostate removed by Suprapubic Prostatectomy.

Dr. F. D. BOYD read a communication on Rectal Alimentation. He pointed out that rectal feeding was so universally in use in clinical medicine that it was surprising that at the present day we had not more satisfactory and accurate data on which to gauge its value. While a good deal of work had been done on the subject much of it was fragmentary. The present research had been undertaken with a view of estimating the influence which this method of alimentation had upon the metabolic processes of the body. The observations were carried out in patients suffering from gastric ulcer in whom a period of gastric rest seemed necessary as a therapeutic measure. The patients were kept absolutely at rest and the nourishment selected was given in the form of an enema every six hours. Tables were shown by means of the lantern to illustrate the results obtained. Dealing with the absorption and metabolism of albumin Leube, Ewald, and Huber's results were discussed. In the six cases on which Dr. Boyd had made observations the absorption of proteid was found to be very poor. In no case did it exceed 2·22 grammes of nitrogen per diem and in most of the cases was much below this figure. The caloric value of the proteid absorbed gave a maximum of 56 calories, the average being considerably lower. When a small amount of proteid was given in the injection the absorption was as good as when a large amount was used. When the absorption of nitrogen was considered as per kilogramme of body weight it was found to be only 0·029 gramme per kilogramme, an absorption far below that of exceptional individuals on a nitrogen poor diet in whom nutritive balance was kept up, as in cases recorded by Sivén, Albu, and other observers. The nitrogen balance in the cases under rectal feeding showed a marked negative balance; there was, in fact, considerable tissue nitrogen being used. From the observations it was concluded that proteid food, even when predigested and with salt added, was very poorly absorbed in rectal feeding; that the albumin of eggs, as so constantly used in rectal feeding, was an expensive and unsatisfactory foodstuff; and that the absorption of proteid varied widely in different individuals. Dealing with fat, Dr. Boyd referred to the work of Rosenstein, Munk, Denebar, and others. The results obtained in the cases under discussion differed somewhat from accepted views. In some of the cases a considerable absorption of fat had been obtained when given in a natural emulsion, such as the yelk of egg. The absorption ranged from 51 to 12 per cent. of the amount given. The largest total absorption was obtained when a large amount was given in the injection. A table was shown to exhibit the nitrogen-saving properties of fat when the absorption of fat was good. In relation to the absorption of sugar the question of the breaking up of sugars in the intestine under the influence of micro-organisms was discussed and from experimental data it was concluded that the loss of sugar by its decomposition appeared to be less than 1 per cent. In the clinical cases pure dextrose was used and gave very good results; it produced no bowel irritation and alimentary glycosuria never resulted. The absorption was invariably good, equalling in one case 120 grammes in 24 hours, with a caloric value of 494 calories. A table was shown demonstrating the relations between the food calories used and the loss in the patient's weight. The definite relation between the two factors indicated that the observation data might be considered accurate. Dietary standards were next discussed. In the rectal feeding cases the caloric value of the food absorbed varied from 645 calories as a maximum to 240 calories as a minimum, giving an average of 389 calories. Thus from rectal feeding, even if a reduced dietary standard was accepted, only about a quarter of the necessary nourishment could be obtained. Rectal feeding was subnutrition of the most pronounced character and could not be expected to improve the condition of a patient suffering from malnutrition. In considering the cases it had to be remembered that they were all individuals in whom rectal feeding was very well borne and thus probably showed exceptional powers of absorption. Recommendations were next made in regard to some practical points in rectal feeding if good results were to be obtained. As foodstuffs the yelk of eggs and *pure* dextrose were recommended. It was advised to increase the size of the enema and to give it at longer intervals to minimise the disadvantage obtained from the gastric secretion which followed rectal injections. A large injection given slowly by means of a soft catheter and a filter funnel was well tolerated by most patients. The point of absorption of nourishment injected into the bowel was discussed in the light of Grützner's work and it was urged that a large enema was more likely to pass the ileo-cæcal valve than the small amounts generally in use. While from Dr. Boyd's observations it seemed exceptional for substances injected into the bowel to reach the stomach, still in some cases it certainly did occur and was a point to be remembered in the use of rectal alimentation.—Dr. D. N. PATON spoke in highly appreciative terms of Dr. Boyd's extremely difficult investigation. A noteworthy point was the very small absorption of proteid material. He said that a considerable amount of nitrogen was given off by the bowel contents even in the case of starving men and animals and that this came from the intestinal secretions and shed epithelial cells. He thought that perhaps Dr. Boyd had condemned this method of feeding too much and that though 1500 calories were used each day, the addition of 500 by rectal feeding was surely to be desired.—Dr. WILLIAM RUSSELL agreed with Dr. Paton in thinking that Dr. Boyd's view was too pessimistic. Rectal feeding was not intended to replace ordinary alimentation. He thought that nitrogen might be obtained from some other and perhaps more suitable source than egg albumin. The paper, while showing the small amount of albumin utilised, showed the readiness with which dextrose was absorbed and

that a considerable caloric value was thus obtained and this, as shown by the tables, meant a saving of the body proteid.—After Dr. H. M. CHURCH, Dr. JAMES RITCHIE, Dr. G. LOVELL GULLAND, and Mr. C. W. CATHCART had spoken, the PRESIDENT said that he employed rectal feeding very often and would be very sorry to be deprived of its use. He thought that it had a very great value and often tided a patient over a crisis. It relieved thirst and the feeling of exhaustion and was to be used in cases of emergency.—Dr. BOYD, in reply, said that he was not prepared to treat all cases of gastric ulcer by rectal feeding. He had given saline infusions by the bowels for four or five days in acute cases to the exclusion of everything else and found such treatment very useful. The use of large enemata quenched thirst very well, while small enemata rather increased thirst.

Mr. CATHCART read a paper on Bier's Method of Treating Acute Inflammation by Passive Congestion. He said that surgeons recognised that acute inflammation and suppuration in operation wounds made through unbroken skin were complications which need not arise. Although Lister's method had prevented the onset of an incalculable amount of suppurative disease, it could do comparatively little to cure suppurative disease when it was actually in progress. When pyogenic organisms had become lodged in the body they were safe from the weapons which could have destroyed them when outside. Surgeons therefore had to deal with many forms of suppurative inflammation which they had no power to prevent, such as whitlows, osteomyelitis, injuries of bones, joints, or soft parts infected before the patient sought advice. In all such cases the agents which most effectively attacked the invading organisms were the cells and fluids of the invaded part, and that surgeon succeeded best who best aided those weapons of nature. Bier looked upon inflammation as a curative agent which ought to be encouraged and utilised rather than opposed and thwarted, and based upon this theory he had devised a practical method of treating suppurative diseases which was astonishingly successful and no less simple. By a piece of elastic bandage properly applied the surgeon was enabled to do nearly, if not quite, as much to cure established septic inflammation of the extremities as antiseptic methods had done to prevent them. Mr. Cathcart felt certain that the method would before long be recognised as a standard method of treatment. The bandage was always applied at a considerable distance above the seat of injury—e.g., in a whitlow it would be applied round the upper arm; if a foot, then to the thigh. The bandage was put on sufficiently tight to interfere with the venous return but not so tight as to more than diminish the arterial flow. In acute cases the pressure was very light. The pulse below the bandage should be easily felt and the limb should be warm. One great test of the proper degree of tightness was the relief of pain. It was not always easy to determine the exact degree of tightness desirable. After a few minutes the whole limb began to swell and the fiery red colour, formerly limited to, say, the hand and wrist, extended now up to the bandage. When this œdema was well established serum escaped freely from any wound which might be present. There must be nothing tight below the bandage. Severe cases should be treated in bed. In bad cases the passive congestion should be kept up for 22 out of the 24 hours and this might be diminished by degrees to from eight to ten hours. The position of the bandage should be changed after about ten hours in one place. In parts of the body (e.g., the shoulder) where there was no room to change the position of the bandage Bier recommended that the congestion should not be kept up longer than from eight to ten hours. In the intervals of relaxation the limb should be raised to favour absorption. As a general rule the patient was soon eased of pain and felt better, the pulse improved, and the temperature fell. This fall occurred very quickly when the cause was due merely to absorption of poison from the inflamed area. As the inflamed area improved by the use of the bandage it responded less and less to constriction on the limb until the reaction was almost as little as it would be in health. After convalescence had set in progress seemed to go on faster without artificial aid. Pus should be let out but the incisions need not be extensive. If blisters appeared the bandage had either been too tight or suppuration had occurred and must be relieved. Bier insisted on great care during the first two days. If the bandage were too slack it did no good, if too tight harm resulted. In the treatment of tuberculous cases the congestion should only be kept up for one or two hours daily and in these cyanosis but no œdema resulted, while in acute inflammation the congestion was prolonged for the greater part of the 24 hours. Mr. Cathcart then quoted several typical cases treated successfully by Bier, as the disappearance of abscesses under passive congestion or their transformation into cold ones, acutely inflamed joints (rheumatic or septic), suppurative inflammation of sheath tendons, and acute osteomyelitis. In whitlows and suppuration of tendon sheaths Bier found that numerous small incisions gave all the outlet required with a minimum of injury to important structures and subsequent development of scar tissue. As to the behaviour of suppurating surfaces under passive congestion the pus became increased in quantity and thinner, and its secretion soon ended, sloughing tissue was thrown off or portions of tissue recovered which apparently would have died under the usual methods of treatment. As regards joints in which there might be a fistulous opening discharging pus the pus was made to flow every day by passive movement but existing openings were not enlarged and the joints were not drained. An unopened joint containing pus was punctured with a fine needle merely for diagnostic purposes but was neither opened nor drained. Reliance was placed entirely on passive congestion. Gentle passive movements of the joint were commenced as soon as the anæsthetic effects of passive congestion permitted, generally in a few hours. This combination of early movement with passive congestion had brought about a complete restoration of function in even the most severe cases of suppuration in joints. Out of 22 cases of suppurative inflammation of tendon sheaths treated by passive congestion 14 recovered with sound tendons. Of 14 cases of acute suppurative osteomyelitis treated by Bier, six healed without necrosis, five with very little necrosis, two had extensive necrosis, and one patient died from pyæmia. Bier had applied his bandage to the head and neck as in the treatment of acute suppurative inflammation of the middle ear. Mr. Cathcart's own experience of the method had been on the whole not only satisfactory but surprisingly good. He had treated such cases as suppurative inflammation of the tendon sheath of the little finger, another affecting the hand and forearm of a workman; a more striking case of gonorrhœal rheumatism of the knee; a case of nodes of the tibia with severe wearing pain which was relieved to such an extent that no operation was necessary; a case of cellulitis of the leg where the pain was relieved in ten minutes; a case of chronic septic ulceration of the foot resembling moist gangrene; and many other minor cases. Mr. Cathcart then discussed various ways in which the treatment could be explained in action as well as other modes of treating similar conditions, but though each method might have its advantages yet the most efficient seemed to be that of passive congestion.—Mr. G. A. BERRY said that the induction of passive congestion had been very successful in diminishing pain and in hastening the cure of many inflammations of the eye. For that purpose an irritant called dionine was employed and it was useless unless it produced an excessive amount of œdema. He also referred to the use of saline solutions injected under the conjunctiva for the relief of pain.—Mr. H. ALEXIS THOMSON, Mr. HAROLD J. STILES, Mr. G. SCOTT CARMICHAEL, and Mr. J. W. STRUTHERS took part in the discussion which followed.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 7th, Mr. T. Geraty being in the chair.—Dr. W. B. Ransom showed a married woman, aged 35 years, the subject of Spleno-Medullary Leucocythæmia. Treatment two years ago with liquor arsenicalis up to half a drachm daily resulted in a diminution of the leucocytes from 252,000 to 46,800 per cubic millimetre. Again becoming an in-patient in November, 1905, liquor arsenicalis was given in five-minim doses and the x rays were applied for ten minutes daily over the enormous spleen. 12 days after admission a blood count showed: red blood corpuscles, 3,200,000 per cubic millimetre; white blood corpuscles, 160,000 per cubic millimetre; and hæmoglobin, 45 per cent.; a month later these were respectively 2,400,000, 45,000, and 35 per cent.; a month later still, 3,600,000, 8500, and 70 per cent.; the condition on discharge being 5,600,000, 6520, and 75 per cent., or practically normal. The blood still contained myelocytes and nucleated red corpuscles but the patient felt immensely better. The spleen, though still large, had shrunk markedly. Her weight had fallen during the first month but the loss had all been recovered since and the girth of the

abdomen had behaved similarly. After the first month of treatment the x rays were also applied for an additional ten minutes over the sternum and ends of the long bones. A soft tube was used for the application and no burns had resulted, though the skin had become markedly pigmented. Good results obtained in this way were often evanescent, therefore it was proposed to continue the rays once a week for the present. Microscopical specimens of the blood were also shown.—Mr. A. R. Anderson showed a man, aged 48 years, the subject of Chronic Pancreatitis successfully treated by cholecystotomy. He had been ill for a year with dull aching pain between the umbilicus and the right costal margin. There was tenderness along the outer border of the right rectus muscle but no lump could be felt. The pain had never been as severe as typical biliary colic; it was worse at night and was unaffected by food. Marked jaundice lasting for two months had occurred some time previously to admission and vomiting had been a daily occurrence for the last two months. There were no hæmorrhages and no fever. The diagnosis rested between gall-stone, duodenal ulcer, and pancreatitis, or a combination of any two or of all three of these conditions. At the operation the biliary passages and the duodenum were found practically normal but the pancreas was enlarged, hard, and nodular, especially towards its head. The gall-bladder was stitched to the abdominal wound and was drained with a tube for six weeks. All the symptoms had been relieved and the man had put on weight considerably; the sinus still discharged a trifling amount daily.—Dr. C. H. Cattle read a paper on Bronchitis and Broncho Pneumonia in which he examined the contributory causes of these ailments, classifying them as (1) cold and changeable winds; (2) micro-organisms; (3) faulty nasal respiration causing mouth-breathing; (4) dusty occupations and impure air; and (5) vascular congestions, whether associated with alcohol, (6) mitral stenosis, or (7) the high tension of renal cases. Treatment was beside the mark unless any predisposing cause, such as gout, was noted and corrected. Collapsed lung and lobular pneumonia were in infants frequent complications of bronchitis, which was predisposed to, and made more dangerous by, rickets. Old people showed a similar proneness to lobular pneumonia. Measles, whooping-cough, and enteric fever were constantly accompanied by bronchitis, and broncho-pneumonia also occurred in these diseases and but rarely in scarlet fever. The dividing lines between lobular and lobar pneumonia were not always well defined. In frequently relapsing cases of broncho-pneumonia suspicion should arise of tuberculosis. After the age of four years bronchitis seldom ran on into lobular pneumonia. Various pathogenic and pyogenic organisms occurred in normal air passages and in cases of illness were detected in the sputum or lesions —such organisms as staphylococcus, streptococcus, and pneumococcus (Fraenkel). The secondary form of broncho-pneumonia was more fatal than the primary type. The latter usually attacked robust children. Cerebral symptoms were often well marked in children, especially those who had been ailing some time. The pulse-respiration ratio was highly important in regard to diagnosis. The more important sequelæ dealt with were bronchiectasis and emphysema. These were liable to lead to dilatation of the right heart with tricuspid regurgitation, while the sputum ultimately became purulent. "Putrid bronchitis" comprised: (1) mild and chronic cases; and (2) severe and rapidly fatal ones. The juvenile form of bronchiectasis was one result of broncho-pneumonia. Other cases of fœtid sputum, accompanied by signs of cavity, were probably the result of pneumonia which had gone on to gangrene. A frequent and difficult problem was to decide whether bronchitis was merely masking some other more important disease. For instance, bronchitic signs might lead to a pneumonic patch being ignored. The occurrence of bronchitis with copious frothy sputum in the course of pneumonia made the prognosis much more grave. Acute tuberculosis was liable to be diagnosed as acute bronchitis, but with care the mistake might be avoided. Hæmoptysis was not necessarily tuberculous in origin and might occur also in bronchiectasis or simple bronchitis. Dealing with treatment, the respective value of emetics, venesection, and belladonna was pointed out, while opium had to be used with judgment or altogether avoided. Menthol lozenges were extremely useful for diminishing reflex cough and continental authorities attached great value to cold applications.—Mr. Geraty alluded to dusty trades and Dr. Ransom thought bronchitis apart from influenza, measles, pneumonia and enteric fever was distinctly rare, especially the acute form. Many people whose cough was called "bronchitis" were really suffering from granular pharyngitis, while a considerable number proved sooner or later to be tuberculous. He thought the baneful influence of the east wind had been over-rated and considered the steam-kettle treatment ought to be allowed to become obsolete. The patient's comfort ought to be the main consideration and he noticed a tendency in the disease to run a definite course, like a common cold, regardless of drugs or hot or cold air.—Dr. F. H. Jacob insisted on the importance of systematic examination of the sputum in every case. Even if tubercle bacilli were not discovered lung tissues might be and cases suggestive of pulmonary tuberculosis in which tubercle bacilli were not found often proved to be cases of new growth. —Dr. M. Parry-Jones (Derby) noticed that there was less bronchitis amongst patients living on a sanatorium balcony than anywhere else. He thought bronchitic patients were subject to bronchitis when the wind was north-east, but nobody else was. Cases of laryngeal or pharyngeal irritation were often called bronchitis and he instanced a case of this sort where a post-mortem examination revealed an aortic aneurysm. He had seen very good results with belladonna in children and now knew that collapsed lung was much commoner than he at one time supposed. He had found the creasote chamber give good results in fœtid bronchitis and it was by no means so disagreeable to the patient as was sometimes stated.—Dr. R. Alderson, Dr. W. Hunter, and Dr. W. C. C. Kirkwood continued the discussion.—Dr. Cattle, in reply, thought that when the bronchial tubes were congested there was an advantage in breathing a moist atmosphere warmed to about 60° F., provided it was not super-saturated. As a matter of general experience tuberculous cases exhibiting moist catarrh did not do so well in this climate, especially near the east coast.—Dr. Ransom read a paper on the Diagnosis of Cerebellar Tumours, with specimens and notes of a case.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held on Jan. 31st, Mr. Ernest Solly (Harrogate) being in the chair.—Dr. Alexander Morison read a paper on the Present Position of the Treatment of Heart Disease by Baths and Exercises. He said that the cases of heart disease which the majority of English physicians now, and very rightly in his opinion, considered suitable for treatment by baths, exercises, and climatic conditions were, speaking generally, such as could safely travel for a more or less considerable distance and were cases which could in no sense be regarded as seriously ill at the moment, whatever fears might be entertained for their future. These patients, he considered, could be classed in three divisions as follows. 1. Those who had not passed the meridian of life and had a weakness of the myocardium, moderate in degree, with or without irregularity of action, and without organic valvular lesion or organic disease of other organs, and who were quite free from essential renal disease. 2. Those who exhibited a similar degree of disordered action of the myocardium associated with organic valvular disease, other than aortic reflux and the various organic diseases of the right side of the heart, with the exception of milder forms of cardiac malformation, and who were free from extra-cardial adhesion so far as could be determined (for this was usually difficult). 3. Older patients with myocardial debility, without arterio-sclerosis, without organic valvular disease, without disease of organs other than the heart, and without symptoms of angina vera, to use a convenient but not strictly accurate term.—Dr. E. Symes-Thompson said that whilst he continued to use baths in some cardiac cases he attached more importance to the exercises than to baths.—Dr. W. Bezly Thorne said that he was unable to perceive from any evidence disclosed by the paper to which he had listened that the opinions therein expressed were based either on facts or on definitely recorded observations. His own experience of some 8000 recorded cases had led him to conclusions with regard to several points which had been raised diametrically opposed to those expressed. For example, there were no cases in which the results of treatment were more strikingly satisfactory than in septuagenarian atheroma, in the graver forms of angina pectoris, and in aortic reflux. The only limit he knew to the benefit of treatment in the last two classes of cases was where there were clinical grounds for coming to the conclusion that the coronary vessels had permanently lost the qualities which would be

necessary to myocardial repair. He thought that the striking difference between the results recorded by Dr. Morison and those observed by himself must be due to differences of technique. He was quite prepared to submit his records to any scrutiny which the society might think desirable in confirmation of his statements.—Dr. Leonard Williams said that he agreed with Dr. Morison's opinion that the cases suitable for treatment by baths and waters were comparatively few. He strongly deprecated the fashion which had obtained at one time of hurrying people in a more or less moribund state half across Europe in the expectation of some miraculous "cure" on arriving at their destination.—Dr. William Ewart said that although many cases were unsuitable for the systematic Nauheim treatment as laid down in books, he nevertheless believed in modified applications of its methods to suit the indications. He was therefore less inclined to classify the cases rigidly, as so much must always depend upon their individual features. This was specially true of the cases of aortic valvular disease, between which the kind, the degree, and the duration of the lesion, and the patient's age, constitution, and peculiarities, established vast differences. He believed that carbonic acid played an important part in the balneary treatment.—Dr. Charles Begg (Bath) said that an experience of five years, begun at Nauheim, led him to endorse Dr. Morison's conclusions. Suggestion played a very conspicuous part in the treatment at Nauheim and was a very powerful agent in dealing with such an organ as the heart. The treatment by baths and exercise ought to take its place as, in suitable cases, a useful help, but it was not by any means a specific.—Dr. C. W. Buckley (Buxton) said that in his opinion the issue was confused by the use of the word Nauheim and urged that the treatment of heart disease by physical methods should be considered from a wider standpoint. The result of baths and resisted exercises was to lower the blood pressure and to increase the tone of the arterioles—i.e., to assist the heart's action by promoting the action of what had well been called the "skin heart." The smallest hygienic and other proceedings might tend to this end and in this sense the value of physical treatment was not to be denied in any heart trouble, and, looked at from this standpoint, the apparently irreconcileable views which had been expressed at the meeting might come into harmony if not unison.—Dr. Morison, in his reply, said that he regarded baths and exercises as occasionally a useful adjunct to more serious treatment, whereas it appeared to him that what he considered serious treatment was regarded by Dr. Bezly Thorne as a useful adjunct at times to the employment of baths and exercises.

LIVERPOOL MEDICAL INSTITUTION.—A pathological meeting of this society was held on Feb. 8th, Mr. Frank T. Paul, the President, being in the chair.—Several interesting specimens were exhibited.—Mr. K. W. Monsarrat showed a Large Periosteal Sarcoma of the Femur.—Mr. D. Douglas-Crawford exhibited an Intussusception of the Colon with a Papilloma at its Apex successfully removed by operation; also a Sarcoma of the Rectus Femoris Muscle and a Thyreoglossal Duct Lined by Stratified Epithelium.—Dr. W. Blair Bell and Mr. Clarke showed specimens of Hypernephroma of the Kidney and of an Angiomatous Fibromyoma Uteri.—Mr. W. Thelwall Thomas showed specimens of Excised Gangrenous Intestine, Traumatic Rupture of the Colon, and Two Ovarian Tumours with Twisted Pedicles giving rise to signs of Intestinal Obstruction.—Mr. Thomas also showed (with Mr. H. F. Woolfenden) specimens of Accessory Thyroid, Tuberculous Teno-synovitis, Tubercle of the Mamma, Cystic Kidney, and a growth from the Thumb of doubtful nature.—Dr. R. J. M. Buchanan read a note on the Examination of the Blood by means of Cut Sections, illustrated by microscopical preparations. He considered that this method showed the blood plates better than the film method.—Dr. Nathan Raw read a note on Acute Yellow Atrophy of the Liver and remarked on the fact that in six cases which he had seen there was a definite history of syphilis; specimens from two cases were shown.—Dr. Owen T. Williams read a paper on the Influence of the X Rays on the Nitrogenous Metabolism in Leukæmia, showing as the result of two investigations that sittings of ten minutes per diem produced a marked increase in the excretion of nitrogen and of uric acid. There was also a preliminary rise in the number of leucocytes, a fact noticed in five of the seven cases treated at the Liverpool Royal Infirmary. Synchronous with these changes there was a constitutional disturbance, anorexia being the prominent feature. In the blood there were signs of disintegration of the leucocytes, the reaction to basic dyes rapidly diminishing. The conclusions drawn were that sufficient time should be allowed between each sitting to allow the body to excrete the noxious products formed and so to prevent the severe constitutional disturbances which followed prolonged administration of the rays.—Dr. H. R. Hurter showed Films illustrating the Blood Condition in Leukanæmia. This hybrid term, he stated, we owe to Dr. F. Parkes Weber, who introduced it as the English equivalent of the German term "Leukanämie," first employed by von Leube to designate cases of primary hæmopathy (or myelopathy) which present the characters of pernicious anæmia and acute myelogenous leukæmia simultaneously. The patient from whom the specimens were obtained was a youth aged 18 years in Sir James Barr's hospital practice. Admitted in August with classical Addison's anæmia he died from acute leukæmia in September. In the early stage the red cells numbered 512,000 per cubic millimetre, the colour index being 1·5 and the leucocytes 6000 per cubic millimetre, of which 10 per cent. were myelocytes. At this time there were 14,000 megalobiasts per cubic millimetre of the blood. Six weeks later the red cells had fallen to 430,000 and the leucocytes had risen to 290,000, of which nearly 40 per cent. were myelocytes, many of the latter being of the hyaline variety described by Türk as "Reizungsformen." Dr. Hurter thought that this unique case was of importance as demonstrating the evolution of myeloid leukæmia from a blood state indistinguishable from Addison's anæmia, but he agreed with Hirschfeld that leukanæmia and acute myeloid leukæmia were not separate pathological entities, severe anæmia being commonly part of acute leukæmia, whether of the myelogenous or lymphatic forms.

Reviews and Notices of Books.

The Food Factor in Disease: Being an Investigation into the Humoral Causation, Meaning, Mechanism, and Rational Treatment, Preventive and Curative, of the Paroxysmal Neuroses (Migraine, Asthma, Angina Pectoris, Epilepsy, &c.), Bilious Attacks, Gout, Catarrhal and other Affections, High Blood Pressure, Circulatory, Renal and other Degenerations. By FRANCIS HARE, M.D., late Consulting Physician to the Brisbane General Hospital; Visiting Physician at the Diamantina Hospital for Chronic Diseases, Brisbane; and Inspector-General of Hospitals for Queensland. London, New York, and Bombay: Longmans, Green, and Co. Two vols., medium 8vo. (Vol. I., pp. xiv.–498; Vol. II., pp. viii.–536.) Price 30*s.* net.

THE purport of this work is to show that excess of carbonaceous material in the blood or, as the author terms it, "hyperpyræmia" (Gr. πυρέα = fuel) is an essential, though by no means the sole, factor in many disorders, such as some of the paroxysmal neuroses (migraine, asthma, angina pectoris, and so on), bilious attacks, gout, and some catarrhs. The possibility of hyperpyræmia as a cause of disease was directly suggested to the author by the sudden and complete subsidence of the paroxysms which in two cases of recurrent migraine followed restriction of the carbonaceous intake prescribed for obesity. This led him to investigate the influence of the carbonaceous food-stuffs in health and disease, and the present work is the outcome of several years' study of the subject at the bedside and amongst the records of medical literature.

A priori considerations suggest that the carbonaceous compounds have a greater tendency to accumulate in the blood than the nitrogenous. For while the ingestion of proteid food, whether in small or large quantities, is quickly followed by a corresponding increase in the elimination of nitrogenous excreta such as urea, there is no such rapid and commensurate increase in the elimination of carbonic acid after the ingestion of carbonaceous food; indeed, the capacity possessed by the organism for increasing katabolism

in response to the absorption of an excess of carbonaceous food is strictly limited. And it is a remarkable fact, and one very liable to be lost sight of, that for adequate carbonaceous katabolism the organism is largely dependent on muscular exercise and exposure to cold—conditions which influence but slightly nitrogenous katabolism. Hence it follows that a liberal supply of carbonaceous food combined with deficient exercise, especially in warm weather, favours an accumulation of the carbon contents of the blood. Such an accumulation would, of course, be precluded by an adequate increase in the rate of fat formation, but the capacity for fat formation is conspicuously deficient in many persons and may, moreover, have already attained its limit. In these days of warm clothing, warm rooms, and little exercise, when starch and sugar are consumed in such truly enormous quantities, the conditions are, it is contended, all favourable for the induction of the hyperpyræmic state.

The means possessed by the organism for regulating the carbon contents of the blood are discussed at length. The author maintains that an excessive ingestion of starch or sugar may lead to "glycogenic distension" of the liver which, by compressing the intra-hepatic portal capillaries, causes mechanical congestion of the whole retro-hepatic portal venous system and consequently of the whole gastric and intestinal mucosa. Hence digestion and absorption are inhibited and "biliousness" of many clinical varieties may arise. In this way the liver tends to *restrict* the whole nutrient income, and therefore *the carbonaceous income of the blood*. On the other hand, undue accumulation of the carbon contents of the blood may be prevented by an increase in the carbonaceous expenditure of the blood, the main items of which are fat formation, combustion or carbonaceous katabolism, and in women utero-gestation, lactation, and menstruation. These strictly physiological functions are commonly adequate to the task of disposing of the carbonaceous income of the blood. But they may prove inadequate. Then the organism may resort to various pathological means. For example, hyperpyræmia may culminate in an attack of one of the paroxysmal neuroses, such as asthma or migraine. Such paroxysms tend to relieve the hyperpyræmia upon which they depend, the former by greatly increasing combustion or katabolic expenditure, and the latter by temporarily stopping the carbonaceous income through anorexia, and so on. Again, hyperpyræmia may, under different conditions, culminate in acute gout or some acute catarrhal affection. Such attacks, being pyrexial, involve increased combustion whereby is dispersed the hyperpyræmia upon which they depend. All these processes the author refers to as ultra-physiological or pathological functions; they are "salutary in intent" though sometimes they may prove deleterious, even disastrous, in result.

The author seeks to establish his theory of hyperpyræmia by an appeal to clinical facts. He claims to show that all those conditions which favour hyperpyræmia tend to initiate, to precipitate, or to accentuate the disorders ascribed to this blood state; and conversely. The conditions most favouring hyperpyræmia are a large carbonaceous income resulting from a heavy mixed diet and a small carbonaceous expenditure resulting from sluggish combustion. Hence, asthma and migraine are peculiarly prone to commence during the sleep which follows a heavy meal, while both disorders are markedly bettered by the opposite conditions. Warm weather, sleep, and lack of exercise, all of which reduce the rate of combustion, tend to promote the disorders in question, as they do all other hyperpyræmic manifestations. The influence of sleep is of special interest. Asthma, for instance, occurs most frequently between 2 and 3 A.M. when ordinarily combustion is least active; but when, as in the case of journalists, hospital nurses, and policemen, the asthmatic goes on night duty the paroxysms occur during the late afternoon towards the end of the daily sleep. Again, headachey individuals are prone to wake with a headache which is dispersed by the increased combustion caused by rising, washing, and dressing. The hyperpyræmic disorders are further especially liable to occur just before each menstrual period and at the climacteric, at which times, it is argued, there is a special tendency for carbon to accumulate in the blood.

The conditions most hostile to hyperpyræmia are exposure to cold, muscular exercise, utero-gestation, lactation, an ample fat-forming capacity, pyrexia, and glycosuria; and all of these tend to alleviate the hyperpyræmic disorders. Numerous illustrative cases are given; perhaps the most interesting, certainly the most striking, are those showing the influence of the last two. Pyrexia is a most effective "acarbonising" process, not only restricting income but greatly increasing expenditure, and it is certainly a remarkable fact that practically all the disturbances attributed by the author to hyperpyræmia remain in complete abeyance or become markedly modified during the continuance of pyrexia. So decided is this influence that, in the author's opinion, it may often be used as a means of clinching the diagnosis, for or against, in cases of suspected incipient pulmonary tuberculosis. The abrupt cessation about the supposed time of infection, of disorders such as migraine and asthma, or other hyperpyræmic affections such as acne, should strengthen the suspicion of tubercle; whilst their continuance unchanged should constitute strong evidence against such a diagnosis. Again, the pyrexia of acute gout, lasting as it may do many days, is claimed to be curative of the underlying hyperpyræmic condition and of all those hyperpyræmic manifestations (irregular or suppressed gout) which so often precede the articular paroxysm. During the febrile stage of typhoid fever, of which disease he has treated upwards of 2000 cases, the author has never met with an attack of migraine. The efficacy of the seton in migraine he attributes to the mild septic fever which it induces. On these grounds he pleads for a wider employment of this time-honoured measure which he has seen used with advantage in "atypical headaches of many kinds, in hay fever, asthma, epilepsy, and mental aberration." The troubles which sometimes succeed the healing of old-standing sinuses, fistulas, and ulcers he attributes to the cessation of the attendant septic pyrexia or of the purulent discharge, each of which assists in decarbonising the blood. Some striking instances are cited of the beneficial influence of pyrexia on insanity.

Glycosuria may act with equal potency. Not only are migraine, asthma, and insanity profoundly modified by its onset, but also all those disturbances which the author ascribes approximately to glycogenic distension of the liver: for example, certain forms of indigestion, bilious attacks and biliousness generally, and even hæmorrhoids, a point of no small interest.

Adverse critics will naturally ask how the author's theory can be reconciled with the fact that the hyperpyræmic disorders are relieved by glycosuria, a condition in which the sugar contents of the blood are, often at least, super-normal (hyperglycæmia). And Dr. Hare frankly admits "that the conception of hyperglycæmic glycosuria as an acarbonising process presents great difficulties—difficulties which are increased by the fact that in some cases there is also an excess of fat in the blood. Such difficulties are, of course, irremoveable so long as we remain ignorant of the chemistry of hyperpyræmia. All it is possible now to affirm is that hyperglycæmia and hyperpyræmia are for the most part antagonistic in their clinical relationships." (Vol. I., p. 196.)

Comparing the two plans of dietetic treatment—that by reduction of proteid and that by reduction of carbonaceous food—the author pronounces in favour of the latter, at any rate in most cases. By it, he claims, almost immediate

results can often be obtained in recurrent headache, sick or other, in asthma, and angina pectoris vasomotoria, amongst other disorders. "The effect of the dietetic change in the ordinary varieties of recurrent headache, not amounting to formal migraine, points to the conclusion that the *great majority* of these affections are hyperpyræmic and dispersable with great facility by a moderate carbonaceous restriction, perhaps combined with some increase of physical exercise. Each word in the above sentence has been carefully weighed." In some cases a very small increase in the carbonaceous intake may suffice to re-induce an attack, for example, in a case of classical migraine, two or three lumps of sugar, half an ounce of butter, an extra ounce of bread, were always followed within a few days by a paroxysm, even after months of complete freedom.

In practice the author relies mainly on the regulation of diet, exercise, and sleep, on judicious exposure to cold, and on the provision of an abundance of fresh air. As regards the quantity of food he is unable to formulate exact rules. He endeavours by careful experiment in each individual case to determine the minimum carbonaceous intake compatible with carbon equilibrium. If on such a diet the disorder continues, then it is practically certain that some factor other than a hæmic one is exerting a dominant influence and determining what the author describes as "pathological prepotency" (Chapter XIII.). This condition is of great importance, not only theoretically but practically, because it removes many cases from the list of those which can be successfully treated by means which operate only on the composition of the blood.

Doubtless Dr. Hare's thesis will find many opponents. We have been so accustomed to regard an excess of nitrogenous material in the blood as the chief thing to be avoided in prescribing a dietary that it comes somewhat in the nature of a shock to be told that more harm is likely to accrue from an accumulation in the blood of carbonaceous material. But whatever the ultimate fate of his thesis the important fact remains that good may often be achieved by giving it practical effect—by curtailing, that is to say, the carbonaceous intake and enjoining a mode of life adapted to promote carbonaceous katabolism. In this way a long array of troubles can be greatly relieved if not actually cured. The generalisation is a wide one, embracing many subordinate theories; and it is not to be expected that all of these will survive unmodified. But even if the main thesis—namely, the existence of the blood-state or blood-states referred to as hyperpyræmia—which, we observe, has already been accepted by no less an authority than Professor Chittenden—should fail to stand the test of time the author has done no small service. He has brought home to the profession the fact that many disorders, such as migraine and asthma, which some would have us believe are due to an excess of purin bodies in the blood and should therefore be treated by a purin-free dietary, can be even more effectively treated by a dietary in which bird, meat, and fish are liberally represented but which contains carbohydrates and fats only in small proportion.

We welcome Dr. Hare's book. Since the time of John Hunter medical observations have been accumulating in geometrical ratio and have already attained to dimensions which are well-nigh unmanageable. Therefore every serious attempt to correlate a portion of this vast accumulation of isolated—and we are almost tempted to add wearisome—facts, and to deduce therefrom general principles enabling us to group in their true relationships numbers of apparently disconnected phenomena, is worthy of all encouragement. Dr. Hare proceeds largely by deduction, a method of investigation all too neglected by the medical profession. Nevertheless, he does not shirk the application to facts. The work contains upwards of 1800 references to the observations of nearly 600 authorities—observations which the author utilises with great skill and apparent fairness in support of his argument. The quotations are given with evident care and accuracy. The style is lucid and the printing is excellent.

A System of Physiologic Therapeutics, a Practical Exposition of the Methods, other than Drug-Giving, Useful for the Prevention of Disease and in the Treatment of the Sick. Edited by SOLOMON SOLIS COHEN, A.M., M.D., Professor of Clinical Medicine in Jefferson Medical College; Physician to the Jefferson Medical College Hospital and to the Philadelphia General, Jewish, and Rush Hospitals. Volume XI. Illustrated. London: Rebman, Limited. 1905. Pp. 388. Price 12*s.* 6*d.*

THE present volume of this well-known series contains articles on a variety of subjects. The first is on Serum Therapy by Dr. Joseph McFarland, professor of pathology and bacteriology in the Medico-Chirurgical College of Philadelphia. He commences by making some interesting remarks on the evolution of serum therapy and gives a short *résumé* of the history of the subject from the time (1890) when the two Japanese observers, Ogata and Jasuhara, found that animals subcutaneously injected with blood drawn from animals immunised against anthrax likewise became immune. He then proceeds to consider the modern theories of immunity which form the scientific basis of serum therapy. The lateral chain hypothesis of immunity introduced by Ehrlich is fully explained. Owing to the recognition of the various reactions associated with immunity many new terms have become necessary; these are duly defined in this article. Dr. McFarland next gives excellent descriptions of the special serums already in use, presenting an account of their preparation, standardisation, methods of administration and the effects produced by their injection.

The second communication is by Dr. Oliver T. Osborne, professor of materia medica and therapeutics at Yale University, and is entitled "Organotherapy," which he defines as the treatment of disease by means of preparations made from the internal organs of animal bodies. He describes the therapeutic value of preparations made from the thyroid, thymus, pituitary, and suprarenal glands respectively. He also gives a short account of "animal extracts and similar agents of minor importance." Amongst these he includes the following: preparations derived from the pancreas, spleen, testicles, ovaries, mammary glands, parotids, and prostate; and finally, he notes the trials which have been made to make medicinal use of nuclein, brewers' yeast, lecithin, red bone marrow, and glycerophosphates. Dr. Osborne, whilst fully discussing his subject, makes no recommendation that has not been substantiated by the test of time.

Dr. S. G. Tracy, "radiologist," New York Skin and Cancer Hospital, writes on the Medicinal Aspects of Radium, Thorium, and Radio-activity. From his experience with radium he is convinced that its radiations have a positive effect on diseased tissues. He is of opinion that even at this early stage of "experimentation" it seems certain that their "tentative use" is indicated in lupus and other forms of tuberculosis, in rodent ulcer, superficial cancer and some cases of deep cancer, in chronic skin diseases, in atrophy of the optic nerve and blindness from some other causes; also in certain nerve affections, as neuralgia, facial paralysis, and spasmodic tic. Further experience by other observers will be necessary before Dr. Tracy's somewhat optimistic views can be substantiated.

Another contribution to this volume is that entitled "Counter-irritation; External Applications; Blood-letting," by Dr. Frederick A. Packard, late physician to the Pennsylvania Hospital. The various methods of applying counter-irritation are described but Dr. Packard is obliged to admit that although this form of treatment has been used for generations very little is known of the exact mechanism by which

it accomplishes its object. In considering venesection the sensible conclusion is arrived at that the folly of the old practice of copious periodic bleedings in health and upon the occurrence of almost any evidence of disease is no argument against judicious bleeding when true indications for it exist.

The concluding article of this volume is by the editor (Dr. S. S. Cohen) entitled, "An Outline of the Principles of Therapeutics, with especial reference to Physiologic Therapeutics." The great extent of this class of therapeutics is indicated, and with some general remarks on a subject which has filled 11 volumes Dr. Cohen brings to a conclusion a work that has occupied his thoughts for 20 years and has claimed his attention almost constantly for the last five years. He may be congratulated on having brought before the medical world a most complete system on therapeutical measures apart from the use of drugs and the publication will doubtless prove of the greatest value to all practitioners. The last 110 pages of this volume are occupied by an "Index digest of Therapeutic Measures" which will not only in itself afford much valuable information but will greatly aid as a means of reference to the subject-matter contained in previous volumes.

A Text-book of Obstetrics. By ADAM H. WRIGHT, Professor of Obstetrics in the University of Toronto; Obstetrician and Gynæcologist to the General Hospital, Toronto. With 224 illustrations in the text. London and New York: D. Appleton and Co. 1905. Pp. 591. Price 18*s.* net.

THIS work is of interest, as it illustrates the teaching given in the University of Toronto, in which the author is professor of obstetrics. It is written chiefly from the clinical point of view and the text is plentifully illustrated by typical cases from Professor Wright's note-books. While the book contains much practical information which cannot fail to be of service to the student, yet, in our opinion, the style errs in being too popular and not sufficiently scientific. There are a number of minor errors and a good many hasty and not very accurate deductions. Numerous quotations are given from the writings of the Dublin and Edinburgh schools of obstetricians, but the London school, on the other hand, does not seem to find favour in Professor Wright's eyes and several times is spoken of in rather slighting terms. We are all prepared to admit the excellent work in obstetrics which has been done in Dublin and in Edinburgh but before judging the work done in London unfavourably, as Professor Wright seems inclined to do, he should be quite sure that he is really representing the latest views of the chief London teachers. This does not appear always to be the case—for example, the views attributed to Dr. A. L. Galabin on p. 338 with regard to the treatment of accidental hæmorrhage are not those which he holds at the present time and evidently are not taken from the latest edition of his text-book of Midwifery. We are further told that many, if not the majority of, British obstetricians do not consider manual rotation of an unreduced occipito-posterior presentation either a scientific or indeed a practical method. This is certainly not our view of the teaching current in this country at the present time as to the treatment of this complication of labour. It is a pity that in these circumstances the author should so frequently allude to facts or methods of treatment as originating in certain schools—for instance, he attributes the method of abdominal examination described to the Dublin school which can lay no claim to having originated it.

Professor Wright is apparently not inclined to adopt the modern teaching as to the mechanism of labour; he prefers the old terms and explanations and is not satisfied that frozen sections have given any real proof to the contrary. We are glad to see that he does not recommend massage of the breasts. On p. 175 is the statement that "the mortality amongst children in breech deliveries conducted by midwives in Great Britain is simply appalling. A country, however, which by Act of Parliament converts the ordinary midwife into a legalised obstetrician must inevitably suffer seriously from such extraordinary legislation." Such a statement as this shows that the writer is quite ignorant of the object and aim of the Midwives Act and does not increase our belief in the general accuracy of his book. The illustrations on the whole are good and well chosen but the one on p. 44 is quite inaccurate. The book will no doubt prove of service to the students for whom it is written but it presents no features which render it necessary for us to recommend it to English students.

The Modern Mastoid Operation. By FREDERICK WHITING, A.M., M.D., Professor of Otology, Cornell University Medical College; Aural Surgeon to New York Eye and Ear Infirmary, Surgeon to St. Bartholomew's Clinic, &c. Illustrated by 25 half-tone and 23 key plates made from original drawings. London: Rebman, Limited. 1905. Pp. 353. Price 27*s.* 6*d.* net.

THE author of this book is unnecessarily modest in his estimation of his work. He has written a quarto volume of 353 pages and yet he calls it a little book. We cannot but wonder how much larger it would have to be in order to deserve to be called a large book. Within recent years the treatment of inflammation and suppurative disease of the middle ear and its accessory cavities has undergone very great development and the modern mastoid operation aims at nothing less than the laying open all air spaces communicating with the middle ear. There are two chief methods by which this can be done—namely, the use of the burr and of the chisel, gouge, and rongeur. The author chiefly favours the employment of the gouge and he describes the operation with a fulness and an attention to detail which leave nothing to be desired. Every step is illustrated by a photograph and to each photograph is an explanatory plate, with lettering; as each reproduction of these photographs occupies a separate page there is ample room for an enlarged representation of the structures. We are even favoured with an illustration of a patient with his head bandaged after the operation. A very good account is given of the history of the treatment of suppuration of the middle ear from the time of Hippocrates. A useful list and description of the instruments required conclude the volume; some of these are figured. It might have been well to have had diagrams of some of the other instruments. The book is admirably printed. This work will be of interest chiefly to surgeons but all who have to do with patients with middle-ear disease should derive profit from its pages.

The Diagnostics of Internal Medicine: a Clinical Treatise upon the Recognised Principles of Medical Diagnosis. By GLENTWORTH REEVE BUTLER, Sc.D., M.D. With five coloured plates and 288 illustrations and charts in the text. Second revised edition. London: Sidney Appleton. 1905. Pp. xxxiv.–1168. Price 25*s.* net.

IN our review of the first edition of this work we commented on the originality and the success of the author in his treatment of a difficult subject and expressed the opinion that it was undoubtedly the best book of its kind. We learn from the preface to this present edition that it has been very favourably received by the profession at large and that after a number of reprintings it was decided to revise and to bring it up to date and to add the necessary material required by the advances made in diagnostic methods since the first edition was prepared. At the outset we may premise that we have practically nothing but praise for this edition as for its predecessor. The general plan of the work has not been altered and the division into two main parts is still retained.

Part I.—the Evidences of Disease—deals with symptoms and their indications. A great amount of very useful information has been brought together in a very convenient form for reference and it does great credit to the judgment and experience of the author, as well as to his literary abilities, for it might in other hands have easily been a tedious enumeration of symptoms and their associations or monotonous tables of diseased conditions in which they occurred. This part of the work is divided into 45 sections and comprises a very useful and well-illustrated statement of the medical anatomy of the various organs; a detailed description of what are usually called clinical methods; and a critical and careful consideration of the signs and symptoms found in association with the various organs of the body, together with their diagnostic significance and their value in differentiating diseases from one another. In his accounts of the technique of clinical methods Dr. Butler is always practical, concise, and clear. His description and discussion of the symptoms and physical signs of diseases of the respiratory and circulatory systems are worthy of special commendation, for they are most carefully and accurately considered and the sources of fallacy are pointed out. The description of percussion of the heart might with advantage be studied by many practitioners and students of medicine, since it inculcates exactness of observation. Dr. Butler speaks highly of Dr. A. E. Sansom's plexímeter for this purpose. He is also of opinion that auscultatory percussion is a method worthy of more extended use in the mapping out of organs than it has at present achieved. The instrumental methods of investigation of the circulatory organs are also carefully described, especially the use of the sphygmomanometer and the sphygmograph. The description of the former, which is an instrument of considerable value, is one of the most succinct and critical we have seen. Dr. Butler regards the instrument of Janeway as the most satisfactory, although that of Stanton is useful and accurate.

In regard to the nomenclature of the pulmonary adventitious sounds we are not quite in accord with Dr. Butler who defines râles as adventitious sounds produced either in the bronchial tubes or alveoli, and divides them into dry and moist and consequently refers to sonorous and sibilant râles instead of rhonchi. We are of opinion that it is better to restrict the term râle to sounds of moist character and to subdivide them into bubbling and crackling, sounds of dry character being referred to as rhonchi.

In the review of the previous edition we referred to the interesting section on the examination of the nervous system and to the useful diagrams and illustrations. It is somewhat extended in the present volume and retains its excellent features. The sections on the examination of the blood; the stomach contents, the urine, and the sputum are all detailed and practical in character, but that on the investigation of the fæces is less exhaustive. The section on the blood contains descriptions of trypanosoma, piroplasma, and the Leishman-Donovan bodies. The investigation of fluids obtained by paracentesis or puncture is also described. A short section on cryoscopy, or the observation of the depression of the freezing point of the various fluids such as blood and urine in pathological conditions, has been added. The method of using the cryoscope is described and a brief summary is given of some of the results which have been obtained by it. Part I. concludes with a description by Dr. P. M. Pilcher of the uses of the Roentgen rays in medical diagnosis and contains a useful account of the principal appearances observed and the conclusions to be drawn from them.

Part II.—Diagnosis, Direct and Differential—treats of diseases and their characteristics. Here the various diseases are separately considered, a brief summary of their chief symptoms and signs is given, and the differentiation from other diseases simulating them is then worked out. It therefore deals largely with the collation and arrangement of the information given in the first part of the work. This double system of reference constitutes the most original feature of the book and no doubt contributes to its success in no small measure. We are still of opinion, as suggested in our previous review, that the section on constitutional diseases might be improved and that a more detailed consideration of the diagnosis of chronic rheumatism, gout, and diabetes would increase its value. A few statements made in the book might be altered or modified—among them that tetanus neonatorum is a congenital disease, when it is surely acquired immediately after birth. Again, "phthisinoid" for phthinoid is new to us and the use of the word "rheumatic" to indicate the result of exposure to cold is misleading and should not be encouraged. When referring to toxæmic jaundice as "non obstructive" it would be as well to indicate that it is essentially hepatogenous and obstructive in character and not hæmatogenous, as the description given seems to suggest. The book as a whole is, however, singularly free from errors, and we have found it a valuable work of reference and can confidently recommend it to practitioners for that purpose and to students as the most practical and scientific handbook of the principles of diagnosis that we have seen. The illustrations in this edition, as in the last, are copious and of a very high order, and they contribute largely to the interest and the value of the work; some of the anatomical diagrams and drawings are of especial interest and serve to illustrate and to elucidate clinical phenomena very clearly.

Walsham's Handbook of Surgical Pathology. For the Use of Students in Pathological Museums. Third edition. Revised and largely rewritten by HERBERT J. PATERSON, M.A., M.B., B.C. Cantab., F.R.C.S. Eng., Assistant Surgeon to the London Temperance Hospital; Surgeon to Out-patients at the London Lock Hospital. London: Baillière, Tindall, and Cox. 1904. Pp. 529. Price 10*s.* 6*d.* net.

TWENTY-SEVEN years have passed since the first edition of this book was issued. Then it was the only example of a text-book of surgical pathology illustrated by the actual specimens in a museum, but the example has since been followed by others. It is only in the post-mortem room and in the museum that a student can learn naked-eye pathology; the descriptions in text-books without a personal acquaintance with the objects described avail nothing. Morbid anatomy should therefore be read in the museum, exactly as surgery must be learnt, not by merely reading a work on the subject but by examining patients in the ward or in the out-patient department. A work on surgical pathology should be arranged on the same plan as the museum in which it is read, so that as the student reads the description of a morbid condition he may see an example of it before him. This work is based on the arrangement in use at the museum of St. Bartholomew's Hospital and the specimens illustrating each description are referred to by number and are shortly described. Therefore the book is especially useful, as it has been for many years, to students at that hospital, but it can be used with nearly as much benefit by those having access to any good collection of surgical specimens. The revision needed for the present issue of the book has been well and thoroughly carried out by Mr. Paterson and it should give a new lease of life to a work which has proved of immense benefit to many generations of students.

LIBRARY TABLE.

Photographic Atlas of the Diseases of the Skin. In four volumes. A series of 96 plates, comprising nearly 200 illustrations with descriptive text, and a treatise on Cutaneous Therapeutics. By GEORGE HENRY FOX, A.M.,

M.D., Professor of Dermatology, College of Physicians and Surgeons, New York; Consulting Dermatologist to the Department of Health, New York City; Physician to the New York Skin and Cancer Hospital, &c. London and Philadelphia: J. B. Lippincott Company. Vol. III. Pp. 36. Plates XL. to LXXII. Price 10*s.* 6*d.*—Only a few weeks have elapsed since we spoke very favourably of the second volume of this Atlas and all the praise that we gave to the two previous volumes is equally applicable to this. The text extends alphabetically from Leprosy to Psoriasis. The plates, of which there are 32 in this volume, are excellent. The nomenclature, always a great difficulty in dermatology, is not quite consonant with modern English usage.

Surface Anatomy. By RICHARD J. A. BERRY, M.D. Edin., F.R.C.S. Edin., F.R.S. Edin., Professor of Anatomy in the University of Melbourne, formerly Lecturer on Anatomy in the School of Medicine of the Royal Colleges, Edinburgh; and Examiner in Anatomy to the University of St. Andrews, to the University of Aberdeen, and to the Royal College of Surgeons of Edinburgh. London and Edinburgh: William Green and Sons. 1906. Pp. 244, with 46 illustrations. Price 7*s.* 6*d.* net.—In compiling this book Dr. Berry has aimed at giving a description of the surface anatomy of the human body and also of those appearances which may be brought to view by special appliances. He has had the advantage of the coöperation of several anatomists, including Dr. Christopher Addison and Dr. A. Logan Turner, who have revised the sections in which they are more immediately interested. The volume is arranged on the familiar lines of its class and there is little to distinguish it from the many small manuals which have appeared during the last two or three years. Amongst special points we notice that, although the author gives a choice of several methods of cranio-cerebral topography, he ignores those of Anderson and Makins and of Edward Taylor, but he describes the method of Berry and Sheppard, which we presume is his own. In this the demarcation of the motor region is effected by marking out the precentral sulcus. This is indicated by bisecting the distance between the nasion and inion and joining the point of bisection to the junction of the anterior and middle thirds of a line drawn from the nasion through the external angular process to the lambda. The lambda is placed three and a half inches above the inion, a distance which appears excessive. The account of the nasal cavities and accessory sinuses is brief but to the point and is illustrated by three capital illustrations from Dr. Logan Turner's book. Dr. Addison's method of abdominal topography is adopted and concisely described under his personal direction. The structures brought into view by the otoscope, laryngoscope, ophthalmoscope, and rhinoscope are described and depicted in a somewhat diagrammatic fashion. Several of the other illustrations are very rough and hardly up to the standard of the present day; they are, nevertheless, very useful.

Notes on General Practice. By S. M. HEBBLETHWAITE, M.D. Lond. London: The Scientific Press. 1905. Small octavo, pp. 78. Price 3*s.* 6*d.* net.—The subject-matter of this little volume would have made excellent material for a paper at a society or an article in a journal but hardly justifies publication in a book form. These notes range over a large number of subjects in practical medicine, surgery, and obstetrics. There are little attempt at arrangement and no attempt at literary style; but if the diction is at times slipshod and colloquial it is simple and intelligible. The bulk of these pages is devoted to possible errors and pitfalls in diagnosis and to "tips" and "dodges" in treatment, and the author displays a shrewd practical knowledge of everyday general practice which is likely to serve him in very good stead. But we doubt if this form of knowledge is to be conveyed in a book, for the short, crisp instruction, which is so useful in the out-patient room, may entirely lose its perspective and value when conveyed by shorthand notes to the printed page. Dr. Hebblethwaite believes that general practitioners fall into the same pitfalls of error in succeeding generations and he cites such difficulties as obscure cases of glaucoma, of disseminated sclerosis, and of larval Graves's disease, as examples likely to lead to faulty diagnosis. But to be aware that there is such a condition as subacute glaucoma will not supply the power of diagnosing the condition if the practitioner cannot estimate ocular tension or use an ophthalmoscope with certainty. The author says correctly that "subacute glaucoma is apt to be insidious to the practitioner without special knowledge," for it is notorious that mild glaucoma is often difficult to recognise even when the patient is under the care of an ophthalmic surgeon. The effect of the perusal of these notes on the practitioner not especially trained in ophthalmic work would be to produce distrust of his own knowledge, a condition of greater safety to the patient's eyes than an over-weening confidence; yet such timidity may be productive of much discomfort to the patients; some general practitioners are prone to regard all painful conditions of the eyes as iritis, though most of them are simple conjunctivitis or hypermetropic asthenopia with inflamed conjunctiva. The real moral of Dr. Hebblethwaite's remarks on glaucoma is that if a surgeon knows nothing of ophthalmic practice he should lose no time in referring his patient to someone who does know something. Some of the notes on fractures and simple surgical procedures are practical and valuable but it is hardly wise to put up a sprained ankle with belladonna plaster which would in most cases rapidly produce an irritation of the skin preventing further fixation of the joint. Dr. Hebblethwaite waxes enthusiastic over the skill with which a colleague burrowed through the placenta in a case of placenta prævia but readers must not be misled into practising this method as a matter of routine. First recommended by Mohrenheim in 1810, it was advocated by Rigby, but has been discredited by most authorities since. Such examples as these indicate that the practice laid down in this volume is not always sound or carefully considered but its general scope is practical, ingenious, and suggestive.

The Edinburgh Stereoscopic Atlas of Anatomy. Edited by DAVID WATERSTON, M.A., M.D. Edin., F.R.C.S. Edin., F.R.S. Edin., Lecturer and Senior Demonstrator in the Department of Anatomy, University of Edinburgh. Section 3. With 51 Plates. Edinburgh: T. C. and E. C. Jack. 1905. Price £1 5*s.* net.—The first three views in this section complete the anatomy of the abdominal viscera which was mostly included in the second section of the atlas. In one of the new plates we find a representation of a much distended cæcum, lying in the hypogastric region and surmounted by a vermiform appendix. It is unfortunate that neither in this nor in the preceding series is there an illustration of what may be considered an average normal cæcum. In the subjects chosen a greatly distended or a prolapsed cæcum and an enormous or much displaced pelvic colon are present. However interesting and important these conditions may be from a clinical and pathological point of view, they can hardly be considered to belong to normal anatomy, a view which we also took when criticising the inclusion of a hydrocephalic brain in the first section of this atlas. We also think that a remark made in the description of the colon is likely to lead to misapprehension; the statement that "the descending colon, as is almost invariably the case in subjects prepared with formalin, is firmly contracted," is but half a truth, the contracted condition being very common whether the subject has been prepared in any way or not at all. There are but two illustrations of the pelvic viscera, these, like the photographs of the abdomen, being an overflow from

the previous section. In one a novel effect is introduced by presenting a view of the rectum and surrounding peritoneum through the semi-transparent sacrum and coccyx. This view is intended to show the area which is available for surgical operations on the rectum by the sacral route. The majority of the photographs depict the anatomy of the lower extremity. They comprise views of the superficial and deep dissections of the gluteal region, thigh, popliteal space, leg, and foot; illustrations of the hip, knee, ankle, and tarsal joints; and some excellent representations of the surface anatomy of the limb. The views of the deep dissections are more striking than those of the superficial structures and really convey an excellent idea of the relations. The five pictures of the surface markings bring out the muscular and tendinous projections in strong relief and are decidedly useful. In many of the views we still notice a decided tendency to exaggeration of the perspective. On the whole, the section is quite equal in excellence to those which have preceded it.

Lunacy Practice: a Practical Guide for the Certification and Detention of Persons of Unsound Mind. By WILLIAM H. GATTIE, F.C.I.S. London: Simpkin, Marshall, Hamilton, Kent, and Co., Limited. Pp. 53. Price 2*s.* 6*d.*—In these pages the author, who occupies the position of secretary to two metropolitan licensed houses for the insane, sets forth the necessary formalities to be observed in the reception of patients into institutions for the insane and into private care. The case of private patients receives particular attention, and the examples of the judicial order, medical certificates, and accompanying papers in such cases are likely to be useful to the inexperienced. The corresponding information in respect to pauper patients might with advantage be fuller. In the chapter on Absence of Patients on Leave it would, we believe, be better in a future edition to separate explicitly the case of private from that of pauper patients, and to give the procedure in the latter case more fully. It is stated that "the medical superintendent of an institution in which a person of unsound mind is detained has the power to discharge the patient if he thinks it desirable and he also has the power to cause further detention of a person of unsound mind when from the nature of the case it may be deemed necessary." This statement is not strictly accurate, as will be apparent on reference to Sections 74 and 77 of the Lunacy Act. Useful illustrations are given of the various reports which have to be made in respect to detention, death, escape, and so on, of persons of unsound mind. The information respecting private patients for the use of justices is also serviceable. There are many to whom a practical guide of this kind is likely to be acceptable.

New Inventions.

AUTOMATIC WOUND RETRACTOR.

I HAVE recently designed an automatic wound retractor, of which the accompanying illustration is a representation

(half size). The instrument consists of a U-shaped steel spring with clubbed extremities. Curved sharp points are fitted into slots in the clubbed extremities, to which they are jointed by a screw pin. By unscrewing the pin the points can be removed when the instrument is to be sterilised; other points can also be adjusted and, if desired, blunt hooks can be substituted. To introduce the instrument it is held with the spring vertical to the surface of the body. The ends of the spring are approximated by the pressure of the finger and thumb and the hooks are placed under the edges of the wound. On relaxing the fingers the spring opens, retracting the wound edges, and it is then turned down so as to lie flat on the surface of the skin and out of the way of the operator. To remove, the limbs of the spring must be approximated and the hooks are then easily disengaged from the relaxed edges of the wound. I have found the instrument of use in the radical operation for inguinal hernia, dissection of glands in the neck, mastoid operation, and others. It has been made to my directions by Messrs. Baird Brothers, Bath-street, Glasgow.

Glasgow. G. H. EDINGTON.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Feb. 16th, 1828.

Mothers should purchase the book[1]; for there is no woman who deserves the endearing appellation of mother, who will not be interested and instructed by its perusal. The authoress has, moreover, introduced a number of devotional remarks, which reflect great credit upon her piety, but which add rather to the bulk and price, than to the practical value of the volume. Frequent appeals to the Deity, and constant assumptions of the special agency and interposition of Providence, in the ordinary transactions of human life, are never very judicious, and are altogether misplaced in a work of this kind. Philosophically speaking, the fall of a leaf, and of an empire, may, for aught we know of the matter, be events of equal importance, or insignificance, to the great Author of nature; and the application of a blister or a galbanum plaster to the skin of a humble individual, may be as appropriate an occasion for invoking God's blessing, as the annointing of a royal cranium with archiepiscopal oil. But the vulgar are not philosophers; their measure of meanness or magnificence is regulated by the imperfect standard of human associations; and we cannot help reminding the fair authoress, that the cause of piety, which we doubt not she is sincerely desirous of promoting, is rather weakened than advanced, by the habit of associating the name of the Deity with mean and familiar objects, and of invoking his aid and co-operation on light and trivial occasions.

There is a great deal of excellent information to be found in this volume, respecting the duties of wives on becoming mothers, and the care and management of infants and young children, of which no extracts for which we could afford space, would convey an adequate idea.

We had almost forgotten to mention, that the "Good Nurse" is enlivened with a copy of verses, addressed to the authoress, evidently from the pen of that tuneful medical Melibœus, Roderick Macleod, physician and poetaster to the firm of Messrs. Longman and Co. Here they are:—

"The leaves are quite withered
Bestrewed on the ground,
Nature's charms are all vanished by stealth;
A wreath of green bays
Famed Hygeia has found,
To crown her in honour of health."

By the way, we regret to observe, that a single application of THE LANCET to Roderick Macleod's poetry seems to have silenced his Doric reed for ever.

To the Readers of THE LANCET.

MACLEOD *v.* WAKLEY.

The "*Yellow Goth*" will be scarified by Mr. BROUGHAM on Monday next, the 18th inst., in the *Court of King's Bench*, Westminster.

[1] Conclusion of review of "*The Good Nurse, or Hints on the Management of the Sick and Lying-in Chamber and the Nursery.* Second edit. Longman and Co. 1828. 12mo. 387."

THE LANCET.

LONDON: SATURDAY, FEBRUARY 17, 1906.

The Cooperation of the Civil and Military Branches of the Medical Profession in Peace and War.

WE called attention last week to an address given at the West London Hospital by Surgeon-General A. H. KEOGH, C.B., Director-General of the Army Medical Service, to inaugurate a course of lectures on Army Medical Administration in its relation to the coöperation of the civil and military branches of the medical profession in peace and war. The subject is one which invites and merits serious consideration because of its having a direct bearing on the attainment of military medical efficiency, and the points touched upon by the Director-General furnish an ample field for comment. In the first place, it must never be forgotten that the civil and military are but two sides of one and the same profession. Their respective members, whether civil or military, have had the same medical training, possess similar professional qualifications, and have aims and interests in common. Moreover, under many and various conditions of our national life they are called upon to work together in peace and war, making complementary and supplementary efforts. Whatever affects the one touches the other; the higher the position of the members of our public medical services and the greater the esteem in which they are held, the better for the medical profession as a whole. All this is so obvious as to seem platitudinous, but it is not, perhaps, so commonly and thoroughly realised as should be the case; nor is it sufficiently recognised that the civil and military sides of our profession have still a great deal to learn from one another as to what medical aid in modern war means and how to make it most effective.

The Director-General, in his temperate and far-seeing words, pointed out that it was interesting to study the relation between arms and medicine, for it was certain that medical men could largely influence the successful issue of campaigns. But in order to attain this end not only is a competent knowledge of medicine in its widest sense necessary, but also some knowledge of the art of war is required in order that the medical officer may be able to fall in with the military requirements of the situation. The care of the sick and wounded is but one portion of army medical duties, and though it is the most important portion—while it certainly secures the most public prominence—the duties of sanitary organisation and of preventive measures must not be forgotten. The indebtedness of the medical service and of the army itself to the civil side of the medical profession has of late been an increasing one. London is the centre to which all medical officers must now gravitate in course of their service. What with the number of hospitals in the metropolis, the quantity and variety of injuries and diseases within their walls, and the lectures and post-graduate courses and other opportunities for study, the army medical officer has nowadays ample means available for keeping himself abreast with advances in scientific knowledge of all sorts. Special arrangements are made to meet his case in many directions. It is easy then to see how fully in any scheme of coöperation between the civil and military branches of our profession, the civil branches are already acting their part. In times of peace, so as to be ready for times of war, the army medical officer can now get into close touch with all developments of modern medicine. But the need for reciprocity must not be lost sight of. To fit the civilian medical man for military duties some knowledge of the art of war is also required if a coöperating medical profession is to meet medical and sanitary requirements and to avoid dissipating its energies in times of emergency. The civil side of the profession must here learn from the military side—military and medical organisation, hospital administration upon the difficult basis afforded by the exigencies of campaigning, the calls of service in the field in general, and so on, concerning all these things the civilian must be instructed by the military man. It is needless to point out that all preparations and arrangements in these directions, if they are to prove efficacious in the stress and strain of war and to be preventive of lavish expenditure, should be well known and tried beforehand as far as possible in time of peace. And, as far as possible, also, the greatest stress should be laid upon matters of practical importance.

This brings us to a third point. Our army medical readers will not have failed to notice that in addition to the usual technical questions at the examinations of majors of the Royal Army Medical Corps for promotion there are now questions asked on the "laws and customs of war on land." All knowledge is useful to everybody, but we see no more urgent reason than this for compelling the medical colonel to be a forensic expert, and we do not desire under any scheme of coöperation that the civil medical man should share in such legal acquirements. We regret that the military medical officer should be asked to undergo tests in such matters. The demands of scientific medicine are now very exhausting. In every direction there is more to be learned in purely professional subjects than any medical man, military or civil, ever has time to learn. It is a pity that there should be any opportunities afforded for the wasting of valuable energy.

The History of the Society of Apothecaries of London.[1]

MR. C. R. B. BARRETT, M.A., has produced a most entertaining volume concerning the Society of Apothecaries of London. He has had access to the minute books of the Society and he has from them been enabled to construct a book full of amusement and instruction.

[1] The History of the Society of Apothecaries of London. By C. R. B. Barrett, M.A. Illustrated by the Author. London: Elliot Stock, Paternoster-row. 1905. Pp. xxxix.-310. Price 21s. net.

He deplores the absence of information with regard to many important political or social events—the Great Plague and the Great Fire receive but scanty notice—but on the other hand there is abundant reference to many matters of internal interest, though even here inquiry is constantly baulked by the omission of some important details. In the records of numerous petty squabbles which were brought before the Court of Assistants we hear the rumble of the thunder but we hardly know what it is all about. Thus an unfortunate examiner was charged with having written a letter which appeared in a medical publication: the letter is stigmatised as "a violation at least of Propriety in any member of the Society," and the writer was accordingly removed and displaced as a member of the Court of Examiners, but the absolute subject of the letter is not stated. Again, in 1846, the Master, who had taken umbrage at some disparaging terms employed in the Hunterian Oration, "explained the course which he had felt it due to his position as Master of the Society to take on the occasion" and the resolution recording the warm thanks of the court is duly found in the minutes, but what the Master did is not precisely stated. The charter of the Society is given *in extenso* and in this document we find much that foreshadows and explains many of the subsequent difficulties of the Society. The duties of the master, wardens, and assistants are defined, and the charter even provides for the nomination and election of "one honest and fit Man" to be the common clerk of the said Company, and similarly for "one apt and fit Man" to be the beadle; the distinction in the terms of suitability is sufficiently curious, and the minutes show that in spite of the "corporal oath" before the master and wardens, both of these officials have frequently given trouble. The early years of the Society were not marked by a spirit of unanimity; the grocers petitioned to annul the charter of the Apothecaries, and some of the apothecaries objected to separation from the grocers, while inconvenience at the courts was caused by the non-attendance of assistants and this led to the imposition of fines. Work was further hampered by impecuniosity, in spite of loans from some of its wealthy members and of the frequent imposition of fines. Fines were at this time employed to solve every difficulty: two of the assistants quarrel and the dispute is arranged by an agreement that whoever renews the difference is to be fined £20; a man who had failed in an "art" examination on payment of a fine of £50 received his apothecary freedom and was permitted to open business; a penalty of £10 was incurred by those who privately canvassed the assistants for their "voices," and 40*s.* had to be paid by any member who indiscreetly divulged the private affairs of the Company. Penalties were also incurred by those who declined to take office as master or warden, and so many seemingly valid excuses are recorded from those who did not desire to have greatness thrust upon them that doubt must be felt about the disinterestedness of some of the nominations. In 1627 a man was fined for keeping more apprentices than he ought and soon after, on separate occasions, two other fines were imposed upon offenders for failing to keep their engagements when they had accepted invitations to dine with the Lord Mayor.

But despite internal struggles the Society became prosperous, so that in 1631 it was felt that its dignity required headquarters more fitting than a hired hall. As the result of strenuous efforts a house and grounds in Blackfriars were purchased and the first meeting at the new Hall was held on Dec. 11th, 1632. There are indications that the Society was concerned about its public appearances; it had already provided a barge and banners for Lord Mayor's Day and had attended a service at "St. Paul's Church" on Christmas Day, and had presented the Lord Mayor with a tun of wine in recognition of the condescension of his invitation, and now with the new Hall it was decided to engage a cook and a butler. Then followed hard times again, with numerous serious lawsuits, heavy taxation, and a loan to His Majesty; so the Hall was let to a lady of title and her family as a dwelling house, the Company being permitted to hold their courts or festivals in the Hall; this tenancy, however, terminated at the end of a year and subsequently the Company of Feltmakers took the premises to hold their courts in. With the Restoration came a period of feasting during which serious business seems to have been in abeyance, though squabbles for precedence arose and had to be argued by counsel at the Guildhall. The Company, however, continued to keep close watch over apprentices, especially with a view to frustrating attempts to evade enrolment, and many prosecutions and fines resulted. Troubles with the Royal College of Physicians of London now arose, the physicians proposing (1) that apothecaries should not practise, and (2) that they should give assurance faithfully to prepare prescriptions; while the Company insisted that those connected with the College should not "keep Apothecaries in their shoppes." Thus, even before the Great Fire the main provisions for a prolonged struggle had been formulated. The destruction of the Hall at the Great Fire necessitated economy and also led to efforts to increase the wealth of the Society by extending its scope and adding to its numbers. The rebuilding of the Hall and the erection of a laboratory occupied much of the attention of the court for two or three years, but the minute book shows that smaller matters frequently intervened, among those being the "greate animosities between the Clarke and the Beadle." A few months after this entry the clerk was discharged for divers misdemeanours and in the following year the beadle and his wife were turned out of their rooms for using abusive language. The new Hall was speedily utilised as a source of revenue; thus on one occasion it was let for a funeral, on another it was let as a dancing school for young ladies, and it was actually so used for two or three mornings each week and for one evening from 6 P.M. to 9 P.M. The celebrated "dispensary" dispute with the College of Physicians smouldered a long time and frequently led to much ill-feeling between the College and the Company. One of the questions then propounded still survives in regard to the out-patients of modern hospitals, viz.: "Who is to recommend fitting objects for the charity?" The physicians answered: "The ministers, churchwardens, and overseers of the poor are the best, as knowing the poor and their necessity," and for other arguments we refer our readers to the book.

It would, in fact, be an injustice to the author of this

interesting history to attempt to collect further gems; we have not touched upon the vicissitudes of the barge, its glorious banners, and its use for the transport of soldiers. The Chelsea botanic garden is another noteworthy topic, this interesting possession being apparently a source of much expense, although the gardener had to provide shells for the garden walks. The detailed history is brought down to 1864, when for obvious reasons the author thinks it needful to generalise. From a perusal of this book it is evident that, like other human institutions, the Apothecaries' Society has had its periods of prosperity and its times of financial anxiety. For the latter it is also clear that lavish expenditure, in accordance with the spirit of the age, must be held to be responsible; the records of banquets are frequent and the Court certainly appears to have expended some of its funds not too happily. On the other hand, it has evidently striven to maintain a spirit of dignity and respect and it has done much to protect the interests of the large body of its Licentiates. Its activities have often been crippled by costly legal proceedings and its deliberations have frequently been interrupted by serious complaints of the misdeeds of the clerk, the beadle, and their respective wives. No doubt the minutes make the most of these internal squabbles, but they produce a droll picture of a grave court of elderly gentlemen endeavouring to understand why petty jealousies should arise and plaintively protesting that they tend much to the hindrance of the proceedings. The account given in this sumptuous volume is illustrated by numerous drawings by the author, showing many interesting details in the present building, some dating from the early history of the Hall.

The Playground of the Streets.

IT is a truism which is almost a platitude that the right bringing up of a child depends as much on playtime as on schooltime. The legend that WELLINGTON said that the battle of Waterloo was won in the playing fields at Eton is, we believe, exploded, but no one would suggest that the historic battle was won in the class-rooms, while the mere fact of the existence of such a legend shows how important in British minds is a due and proper provision for the recreation of youth. And, indeed, it is not necessary to be a golf enthusiast, a compiler of cricket averages, or a student of football results to know that healthy amusement makes for the best forms of moral improvement and vital expansion. Such obvious reflections follow upon reading Mrs. HUMPHRY WARD'S two recent communications to the *Times*, in which she gives some facts and figures which show both what need exists in London, and similarly in all great cities, for the provision of proper opportunities for the children's play and also what has been done through the instrumentality of herself and a few energetic coadjutors to meet that need in one or two places.

It cannot be ignorance and it must be indifference which prevents the citizens of London from seeing that the children on a part of whose education they are to spend this year some £3,000,000 are completely unprotected out of school hours from influences which infallibly undo a greater part of the good which has been done by school training and teaching. Any person who has worked in a poor neighbourhood, and above all any medical man, must have noticed how the only playground is the streets and how such environment does not, to use Colonel NEWCOME'S favourite quotation, "soften manners and prevent them from being ferocious." Mrs. WARD quotes a Hoxton schoolmaster as saying that London children do not know how to play. This is not quite accurate, whether in respect of Hoxton or other parts of London if we consider play out of doors, for everywhere the passer-by is only too conscious that the children of the neighbourhood are quite acquainted with the delights of peg-tops, tip-cat, battledore and shuttlecock, and the iron hoop. These are not games of the sort that the National Service League desires to see played regularly in schools, and their connexion with physical development is rather remote, but such as they are they are games. And London children would play the games, whose value to our boyhood is so well summed up by Dr. W. P. HERRINGHAM in another column of THE LANCET this week as well as any other children in the world indoors or out of doors if only they had the chance—if only there were places where they could play. As to indoor play or occupation there is no doubt that the average London child is quite ignorant. And how can it be otherwise? In some cases there is only one room for the whole family to live in while the parents both go out to work; at best the available living rooms must be overcrowded by the ordinary necessities of domestic life and can offer no facilities for indoor games or recreation of any sort. In such an environment how can children learn to play? If they remained indoors it could only be to lie in bed or to sit in corners, but as a matter of fact in most instances the children when they are not at school are turned into the streets by their parents. When the mother goes out to work and does not return until the evening there is no other alternative. It is impossible to leave children alone indoors because of the perils of the grate and the lamp, and so the money for fuel and oil is saved and the little ones seek the comparative safety of the streets, where they play or huddle together "until mother comes home." School time ends at 4.30 P.M. and the homes of the children will possibly not be available to them until 8 P.M., and it was with a view to find some means of looking after the children between these hours that the evening classes and organised games were started by a group of practical philanthropists. The movement began at the Passmore Edwards Settlement in Tavistock-place, rooms being opened from 5.30 to 6.45 P.M. in the winter, where the children were received and play was organised for them. In the summer the children were transferred to a garden belonging to the Duke of BEDFORD which lies at the back of the Passmore Edwards Settlement. The scheme proved very successful, so that it is not surprising that about a year ago sundry charitable persons gave sums of money amounting to about £800 per annum for two years to carry on similar work, and a committee was formed which inaugurated eight play centres in various poor districts of London. The education committee of the London County Council lent its schools and, we are informed, supplies lighting, warming, and "equipment." Reports on the working of the scheme by those who are well qualified to judge show that the results are most successful. The children are kept out of the streets, they learn simple occupations, and their

notions of cleanliness, manners, order, and decency are raised to a much higher point than formerly.

Lady JERSEY, Mrs. BLAND-SUTTON, and their coadjutors have a similarly cheerful report to make in connexion with the organisation of Children's Happy Evenings, but it is obvious that private effort cannot possibly deal with even an appreciable number of the poor school children of London. Mrs. HUMPHRY WARD has estimated that if a hundred play centres were started they could deal with 100,000 children and would cost £20,000. The figures are based, of course, upon the personal knowledge gained by dealing with the eight existing play centres. We should be inclined to double this sum if the management were represented by any public body instead of being conducted by private effort. Certainly anything in London connected with education committees has a wonderful faculty of costing more money than is estimated for. That was the invariable experience under the old School Board and nothing has happened to alter the circumstances. Be this as it may, the new Minister of Education has perhaps an opportunity in the forthcoming Education Amendment Act for drafting a clause which may make it possible for the London County Council to take charge of a play centre scheme. The crying fault of modern elementary education is the want of discipline, not in class but out of it. In the large public school for the well-to-do classes boys are taught from the moment when they arrive that they have a duty to the school, that they are members of a body with traditions. They learn not to think more highly of themselves than they ought to think, they undergo discipline at the hands of their fellows and in due time as they rise in the school they exercise authority over their comrades, even as they themselves rendered obedience when they were juniors. There is nothing of this sort at a rate-supported school. But in play centres the principles of self government could and should be inculcated, and from Mrs. WARD's description of the work already done it would seem that this is recognised in all the existing centres. To learn habits of discipline early is no small benefit to children, for the boys and girls of to-day are the fathers and mothers of to-morrow. If they are trained in habits of self-control, if they are early made to feel that they have duties towards their neighbours to perform, they are far more likely to raise up progeny whom they can train in the principles of *σωφροσύνη*. This is a view of the matter which will especially appeal to all workers in psychological medicine, for undoubtedly a large proportion of the sufferers who come under their hands are the victims of self-indulgence and want of self-control.

Annotations.

"Ne quid nimis."

THE VENTILATION OF THE SMOKING CARRIAGE.

How inefficiently, generally speaking, the average railway carriage is ventilated is strikingly illustrated in the shut up smoking compartment in which several persons have been smoking for some time. The carriage remains full of smoke and very little appears to be removed unless the window is opened. Although some immunity would appear to be enjoyed from the irritating effects of tobacco smoke by those who have been exposed to the smoke for some time, yet it is obvious that in a carriage which is inadequately ventilated a large portion of the smoke must be inhaled, for the air that is being breathed is laden with tobacco smoke. Now, the poisonous effects of tobacco-smoking are most marked when the smoke is inhaled or when it is brought into intimate contact with the lung cells and conveyed directly into the blood. The cigarette smoker who "swallows the smoke," as it is often said, deliberately exposes himself to the risk of unmistakeably poisonous symptoms, as are manifested in palpitation of the heart, dyspeptic disturbances, impairment of vision, headache, breathlessness, malaise, and so on, and precisely the same risk is run by those who remain long in a carriage which is practically always full of smoke for the want of efficient means of ventilation. Indeed, the risk in the latter case is greater, because not only is the smoke drawn from the tobacco inhaled but that escaping from the bowl of the pipe or from the lighted end of the cigarette or cigar is inhaled also, and it is well known that the smoke of smouldering tobacco has very powerful physiological effects. Amongst the highly toxic products occurring freely in tobacco smoke is carbon monoxide which has disastrous effects upon the oxygen-carrying power of the blood. Smokers in the railway carriage should guard themselves against the evils of inhaling smoke by agreeing to give the smoke an outlet by opening or partly opening the window—that is to say, if the ventilating arrangements provided prove to be useless, as is nearly always the case. The smoker who is jealous of his health enjoys smoking without having recourse to inhaling the smoke and he should see that his care to avoid the dangerous process of directly inhaling tobacco smoke is not defeated by smoking in a smoke-contaminated atmosphere which is practically never changed. For the same reason the smoking concert is an institution not free from danger and is a very frequent source of disturbance to health.

MEDICAL EXCURSIONS FOR STUDENTS OF MEDICINE.

IN THE LANCET of July 15th (p. 171) and July 22nd (p. 236), 1905, we gave a short account of some medical excursions for students of medicine which had been organised by M. Etienne Bazot. As, however, the proposals for the excursions were not set on foot until the summer vacation had commenced it was found to be impossible to carry out the scheme last year. It is hoped, however, that the scheme can be carried through this year and M. Bazot has forwarded to us the proposed programme. It must be understood that the excursions are not to be absolutely complimentary such as were the respective visits of French medical men to England and of British medical men to France, but that a certain sum will be charged after the fashion of the Voyages d'Etudes Médicales. The proposed excursion for this year is intended to leave England on April 18th and to return on April 29th. The places to be visited are Calais, Lille, Paris, Angers, Nantes, St. Malo, Mont St. Michel, Caen, Rouen, and Le Havre. The institutions of special interest to be visited are the Institut Pasteur, of which Dr. Calmette is the head, at Lille, various hospitals and the Pasteur Institute in Paris, the clinique of Dr. Monprofit at Angers, the Pasteur Institute and hospital at Nantes, the hospital and medical school at Rennes, and the hospitals at Caen. The fare for the whole excursion—namely, from London to London, including railway and steamer excursions, hotel expenses, carriages and steamers for excursions, guides, interpreters, and, in fact, everything that is needed—will be 275 francs—viz., £11 per person. The names of those

intending to take part in the excursion should be sent in as soon as possible and must be sent in before April 1st. The subscription may be sent in at the same time as the names are sent in but must be sent in not later than April 10th. Names and subscriptions will be received by, and any other information may be obtained from, M. Etienne Bazot, Administrateur-fondateur des Excursions Médicales Internationales au Service-Annexe de l'Œuvre, 1, Rue de l'Echelle, Paris (1er). It is much to be hoped that British medical students will take advantage of this opportunity to visit French hospitals under the guidance of their French *confrères*. Besides the purely professional visits to hospitals and the like the programme provides for receptions, luncheons, and visits to various places of interest from an historical or other point of view. M. Bazot informs us that he hopes shortly to have some notices printed giving all details of the excursions and he will be most grateful if the deans of the various medical schools will have these notices posted in some conspicuous place. We may further mention that the honorary president of the organisation is M. ROUX, the well-known director of the Pasteur Institute at Paris.

THE ETIOLOGY AND TREATMENT OF HERNIA IN ADULTS.

WE have published in THE LANCET several articles by Mr. R. Hamilton Russell of Melbourne relating to the cause and treatment of hernia, especially in children. In these articles he has maintained that no such condition as acquired hernia ever exists in childhood and he has supported his opinion by many ingenious arguments. In the issue of THE LANCET of Feb. 10th, p. 363, we published an article by Mr. R. W. Murray of Liverpool on the Etiology of Oblique Inguinal Hernia, in which he adduces several arguments in support of Mr. Russell's views, and especially he shows that in 100 post-mortem examinations potential hernial sacs were found in 21 cases; 61 of the bodies were males and 13 of these had potential sacs, and 39 were females with eight potential sacs. Mr. Russell read at the recent meeting of the Australasian Medical Congress a paper on the Etiology and Treatment of Inguinal Hernia in Adults, of which the following is a *résumé*. In the first part of his paper Mr. Russell recapitulates in brief what he has written on previous occasions and then he comes to his main contention—namely, that acquired hernia, other than traumatic, has no existence even in adults. One of the strongest arguments which Mr. Russell formerly employed in favour of the congenital origin of all inguinal hernia in children was the result of operative removal of the sac, for in childhood mere removal of the sac is almost always sufficient to prevent a return of the hernia. This argument, Mr. Russell maintains, is equally valid in adults, for his statistics go to show that recurrence after mere removal of the sac in adults is very rarely seen. These statistics are based on 89 cases, or rather on 63, for 26 of the total number on whom he operated could not be traced. Of these 63 cases recurrence was known to have taken place in only three. One was a woman with an ordinary inguinal hernia which recurred almost immediately the patient got up after the operation; in the second Mr. Russell was unable to satisfy himself that the operation had been efficiently done and he predicted that recurrence would ensue and his prophecy was fulfilled five months later; and in the third case also Mr. Russell thinks he did not tie the sac sufficiently high. If we may take it that only three recurrences supervened out of 63 cases this is only 5 per cent., and it is really a very low rate of recurrence. Unfortunately the fact that it was not possible to trace 26 of the 89 cases must deprive the statistics of much of their value. However, the number of recurrences is much less than most surgeons would have expected. Although the operation which Mr. Russell performs has been described as mere ligature and removal of the sac, he lays great stress on the manner in which the operation should be done. He considers that before the sac is tied all lax peritoneum must be drawn out through the internal ring, so that the ligature may be applied as high up as possible, and then the opening in the abdominal wall is to be closed by concentric traction upon the peritoneum and fascia. No stitches are placed in the muscles and Mr. Russell thinks that if the sutures applied in the ordinary methods of radical cure are not needed they must be harmful and therefore that it is better to dispense with them. Mr. Russell has evidently devoted much care to the consideration of the radical cure of inguinal hernia and his opinions are entitled to careful examination. They are, however, so opposed to the ideas now current as to the etiology and treatment of hernia that it will require some time to enable them to receive the consideration which they deserve. On the results of the method of treatment the matter must be decided.

A CHRONOLOGICAL REVIEW OF THE CHEMICAL MATERIA MEDICA.

AN interesting list of the substances in the materia medica has been arranged in the chronological order of their introduction by Dr. Friedrich Sperling.[1] Many of the substances which are still freely used date back to very ancient times. Thus, sulphur is mentioned in the oldest scientific works, ammonium chloride was known to Herodotus, potassium carbonate to Dioscorides, and mercury to Aristotle, while vinegar, lead plaster, and soap are noted in the works of Pliny. Zinc oxide was generally known to the ancients as "cadmia" or "pompholix," but the alchemists named it "lana philosophica," or, on account of its whiteness, "nix alba"; cupric sulphate was the "chalcanthum" of the Greeks and the "atramentum sutorium" of the Romans, and crude cream of tartar was the "faex vini" of the Romans and was known also to the Greeks. Of other present-day drugs which were known to the ancients the most important are gypsum, lead oxide, ferrous sulphate, alum, sulphide of antimony, oil of turpentine, and sodium chloride. Many important chemical substances were introduced by the Arabians, including hydrochloric acid, diluted alcohol, and camphor, of which the last named was first brought to Europe about the middle of the sixth century. In addition to these substances the celebrated Arabian physician Geber was acquainted with potassium nitrate (sal petræ), nitric acid, arsenious acid, mercuric chloride (known also to Rhazes and Avicenna), mercuric oxide, caustic potash, and diluted ammonia. Geber was familiar also with silver nitrate and lead acetate, but the former was introduced into medicine by Angelus Sala, in the seventeenth century, under the names "magisterium argenti" and "crystalli Dianæ," while the latter does not appear to have been used as a medicine until 1760 when Goulard produced what was known as "aqua vegetomineralis Goulardi." During the thirteenth century stronger alcohol was introduced into the materia medica by Raymundus Lullus as "ultima consilatio corporis humani." White precipitate and ammonium carbonate (from urine) were introduced in the same century. The contributions of the fifteenth century were sulphuric acid—attributed to Basilius Valentinus, who was acquainted also with zinc sulphate—ferric chloride, and sweet spirit of nitre. Paracelsus gave his name to potassium sulphate, which was described by Oswald Croll about 1608 as "specificum purgans Paracelsi." Mercurous chloride was known in Europe in the sixteenth century and sulphuric ether was discovered by Valerius Cordus about 1540. He described

[1] Pharmaceutische Post, 1905, p. 125, reviewed in the American Journal of Pharmacy.

it as "oleum vitrioli dulce" but it appears to have been forgotten for a time until rediscovered by Frobenius, a London apothecary, about the year 1730. Valerius Cordus was also acquainted with the oils of anise and cloves. The seventeenth century was rich in the discovery and introduction of new drugs, including benzoic acid; tartar emetic, produced by Adriano van Mynsicht; ammonium acetate, introduced by R. Minderer, whence the name Mindererus spirit; phosphorus, discovered by Brand in urine; borax, which was introduced by the Venetians in the seventeenth century, though probably known at an earlier period; sodium potassium tartrate, introduced by P. Seignette, an apothecary of Rochelle, whence the names Seignette salts and Rochelle salts; and magnesium sulphate, discovered by Nehemiah Grew in the water of a mineral spring at Epsom. Glauber, who lived in the same century, gave his name to sodium sulphate and was acquainted with other chemical substances. Of these, it is important to notice zinc chloride, known as "oleum lapidis calaminaris," and potassium permanganate. During the eighteenth century Scheele enriched the materia medica by the discovery of chlorine which was first known as "dephlogisticated muriatic acid"; glycerine, which he discovered during the preparation of lead plaster and named the "sweet principle of oils"; and lactic, citric, gallic, and tartaric acids. Secret remedies were employed in very early times. Thus, magnesium carbonate was introduced as a secret remedy early in the eighteenth century under the name "magnesia alba." Other drugs introduced during this century include boric acid produced by Homberg and known as "sal sedativum Hombergi," phosphoric acid, magnesium oxide, acetic ether, tannic acid, bismuth subnitrate, sodium carbonate, and thymol. It is unnecessary to recapitulate here the vast number of important elements—alkaloids, glucosides, and inorganic salts—which were discovered during the nineteenth century, but a brief reference to the order of the introduction of the so-called synthetic remedies is of particular interest. The first synthetic remedy would appear to have been iodoform, which was produced by Sérullas in 1822 and introduced into the materia medica about 1837. Phenol was discovered in coal-tar by Runge in 1834; salicylic acid was prepared by Kolbe in 1839 and introduced as an antiseptic in 1873. Liebig produced chloral hydrate in 1832 and Liebreich introduced it into medicine in 1869. Chloroform, discovered independently by Liebig and by Soubeiran in 1831, was first used as an anæsthetic by Simpson in 1847. Resorcin was discovered by Hlasiwetz in 1864, sodium salicylate was first prepared in 1875, naphthol was produced in 1881, and antipyrine was discovered by Knorr in 1884. Then followed hundreds of other synthetic substances, including acetanilid (1886), phenacetin and saccharin (1887), sulphonal (1888), and trional (1893).

A "FACING FAKE."

IN a good many instances the public is to be blamed for the existence of certain adulterations by giving a silly preference for those articles which appeal to the judgment merely on the score of attractive appearance. The loaf of bread must be spotlessly white, the preserved peas must be brilliant with copper colouring, and other characteristics are eagerly sought after without regard to the damaging effects, dietetically speaking, to which manipulation in the directions indicated may give rise. Some people, it would seem, regard a polished appearance as indicative of quality in rice, and, of course, a simple trick is devised falsely to impart a polish to rice, and thus the stupid criterion is satisfied. Mr. Cecil A. Cribb, B.Sc., F.I.C., and Mr. P. A. Ellis Richards, F.I.C., have recently found that a compound of magnesia and silica is largely employed in this polishing process and in a paper read before the Society of Public Analysts they record an interesting series of analyses giving the amounts of extraneous silicious matter found in certain samples. The substances which it is suggested are used in the polishing process are French chalk, powdered talc, and mica. Rice is also polished by other processes which would appear to be less objectionable. There can be little doubt that if rice is treated in a proper way for cooking—that is, by soaking it and washing it before it is steamed—the cooked product will probably be freed thereby from the added mineral material. We cannot, however, find the slightest justification for the process which clearly places the rice so treated in the category of articles that are made to seem that which they are not. The prevalence of disease due to the action of irritants in the intestinal canal has found, according to some observers, explanation either in the impoverishment of foodstuffs by impudent manipulation or by deliberate addition of objectionable substances, and this newly discovered trick adds force to the suggestion. This "facing fake" should be stopped.

FATAL RESULTS FROM SUBCUTANEOUS INJECTION OF METALLIC MERCURY.

IN recent years the treatment of syphilis by subcutaneous injections of mercury has become very common. Yet serious and even fatal results have from time to time been recorded and probably by no means represent all the casualties. At the meeting of the Société Médicale des Hôpitaux of Paris on Jan. 12th M. Le Noir and M. P. Camus reported the following case. A woman was admitted into hospital suffering from intense ulcerative and gangrenous stomatitis. Two months previously she had a sore on one of the labia. She was put under mercurial treatment and at intervals of eight days seven drops of "grey oil" were injected into the muscles of the buttock on four occasions—i.e., altogether about from 28 to 30 centigrammes of metallic mercury. Three days after the last injection salivation began, although she had taken great care to keep her teeth clean. On admission the gums were red and swollen and in places superficially ulcerated and there were abundant salivation and greater fœtor of the breath. The tongue was swollen and painful. On the internal surface of the left cheek was an ulcer of the size of a two-franc piece, with a greyish and sanious coating. There were no signs of syphilis. The temperature was 99·6° F. in the morning and 100·7° in the evening. The urine was very albuminous. The patient was in a state of torpor. The taking of food was painful and only a small quantity of milk was imbibed. The stools were frequent, fœtid, and blackish. Potassium chlorate was given and the mouth and teeth were frequently washed. Twelve days after admission the state of the mouth was much worse. The ulcer on the cheek was of the size of a five-franc piece and was covered with a slough. The odour was very fœtid. The temperature did not rise above 98·9°. Nourishment was taken with great difficulty and in insufficient quantity. The diarrhœa persisted and the patient wasted. A mouth-wash of oxygenated water was prescribed. On the internal surface of each cheek was a gangrenous patch occupying more than half its extent and surrounded by a line of demarcation resembling in appearance noma. On the external surface of the left cheek the skin was red and œdematous. There were also gangrenous patches on the soft and hard palate and the lower surface of the tip of the tongue. Mastication was impossible and deglutition and phonation were very painful. The emaciation progressed rapidly and the diarrhœa increased. Vomiting occurred and in spite of slight improvement of the mouth the patient became anæmic and weaker and died in a state of hypothermia (the temperature being 95·5° and 94·1° 12 and six hours before death respectively). The necropsy showed that the buccal ulcers were in process of repair. On the stomach and intestines were numerous ecchymoses.

The colon was congested and covered with a greyish-green gelatinous coating. The kidneys showed acute nephritis, the epithelium being in a state of granular and granulo-fatty degeneration. It is noteworthy that the doses of mercury administered were not large and that the toxic symptoms appeared some time after the administration. Some years ago Mr. Jonathan Hutchinson[1] quoted cases similar to that related above and deprecated the use of mercurial injections in the treatment of syphilis. He pointed out that the advantage of the method consisted in placing in the patient's tissues a more or less lasting supply of mercury but that this constituted at the same time a danger. For if salivation be caused by mercury given by the mouth prompt stoppage of the drug will usually prevent ill consequences. Not so, if a quantity of an insoluble preparation of mercury be injected in order that it may be gradually absorbed. Then only excision of the part can prevent its continuous absorption. At the following meeting of the Société Médicale des Hôpitaux M. Sicard reported a case in which this had to be done. A young man was given weekly an injection of "grey oil" containing the regular dose of from eight to ten centigrammes of metallic mercury. Three days after the fourth injection severe toxic symptoms—stomatitis, albuminuria, nausea, and enteritis—rapidly appeared. At the site of the injections in the left buttock was a large swelling. Radiography showed the presence of metallic mercury. The swelling was excised and was found to contain lardaceous material in which were the remains of the mercury. The symptoms diminished and recovery followed.

VACCINATION IN CHINA.

THE past year, 1905, was the centenary of the introduction of vaccination into China. In 1805 a Mr. Alexander Pearson, surgeon in the Honourable East India Company's service, wrote a small treatise on vaccination which was translated into Chinese by that profound oriental scholar, Sir George Thomas Staunton. The translation as circulated in China was a thin volume covered with the customary yellow paper and entitled "English recently issued Vaccination Rare-Book." "Rare-book" in this case means valuable or important book. On the back page of the work, which is really the title-page, there is a cut representing a human arm with a largish circle above the elbow to indicate the position of the vaccination mark. On the left of the arm a smudge, done in Indian ink, represents a pustule and near the foot of the page is a lancet, the blade and handle of which are covered with Chinese characters. Staunton's translation of Pearson's book was published in Canton, where in 1817 a native tract on the subject appeared and was republished in Peking in 1828. In this native tract part of Staunton's translation was incorporated. "The discovery of vaccination," says Dr. J. Dudgeon in his "Report on the Health of Peking" (1871) "is ascribed [in this tract] to a Western barbarian doctor named Chan-na (Jenner), and the story of its having been brought by a ship from Manila to Macao, which had children on board for the purpose of keeping up the supply of lymph, is related. The terms English and England are studiously avoided. When in 1828 vaccination was introduced into the north of China [by the Prefect Tseng], it was proposed to have a relay of boys on the road from Canton to be vaccinated every eight days; but this plan was abandoned, and crusts were sent, which succeeded. In 1871 there were several vaccine establishments in Peking." Although vaccination is mixed up in the books and practice of the Chinese with much that is absurd and superstitious, yet the fact remains that it has effected a revolution in the health of China. "How fortunate it is," exclaims Dr. Dudgeon, "that the Chinese have taken so kindly to vaccination. When the great oriental peoples have become fully protected, there may be some hope of exterminating this dreadful scourge [of small-pox]. Except for this beneficent discovery no European community could hold India or live in China."

[1] Archives of Surgery January, 1899.

WHAT IS WHISKY?

AT North London police court last Monday the evidence for the defence was concluded and the magistrate, Mr. Fordham, marked the summonses as adjourned for 14 days to enable him to give his decision. He thought that the case was of considerable public importance and before making up his mind on the question at issue he should read carefully through the whole of the evidence. The case has thus occupied the court on 12 occasions. Dr. F. W. Tunnicliffe was the last important witness called on behalf of the defence and he stated that the characteristic of whisky which gives its food value was alcohol in a palatable and pleasant form. He knew of no special value of pot-still as against patent-still whisky or any difference between them as regards their effects. It was merely a question, he thought, of flavour, some patients exhibiting a preference for a "full" and others for a mild flavour. Asked why he did not give rectified spirit as a drug he answered because it was not alcohol in a palatable form. Mr. John McNab, jun., representing a firm of distillers in Edinburgh, said that for 51 years his firm had made all-malt whisky from a patent still. Another distiller said that he supplied both grain and malt whisky, the former being invoiced as grain aqua and the latter as malt aqua. Mr. Fordham's decision will be delivered on Monday, Feb. 26th.

TREATMENT OF SPLENIC ANÆMIA WITH THE X RAYS.

A CONSIDERABLE number of cases has now been recorded in which great benefit was obtained from the use of the x rays in leukæmia and it might be expected that in other blood diseases they would also prove beneficial. In *Clinical Studies* for October, 1905, Dr. Byrom Bramwell has reported a case of splenic anæmia in which great improvement appeared to be due to the x rays. A man, aged 27 years, was admitted into hospital on May 21st, 1905. He had good health until March 15th, 1902, when he was seized with acute pain in the left side of the abdomen and vomited bright red blood. The hæmatemesis continued for 18 hours. After this he had never felt strong and had been sallow. He worked on and off until March, 1904, when he had another severe attack of hæmatemesis. On admission he was very sallow. The skin was of a bright orange colour. The lips and conjunctivæ were very pale. The spleen extended three inches below the ribs. A few small lymphatic glands were felt in the axillæ and neck. The liver seemed small. Loud blowing murmurs were heard over the heart in all the areas and there was a venous hum in the neck. The urine was pale and contained a trace of albumin. He complained of pain in the stomach which increased after meals. The red corpuscles numbered 4,000,000 and the white 3800 per cubic millimetre and the hæmoglobin amounted to 48 per cent. The red corpuscles were very pale and showed slight poikilocytosis. The differential count of the leucocytes was practically normal. Thus the character of the blood excluded pernicious anæmia and leukæmia. On May 30th 53 ounces of blood were vomited and for several days blood was vomited in small quantities. On June 5th the red corpuscles had fallen to 2,440,000 and the hæmoglobin to 20 per cent. Slow improvement took place under iron and rest in bed. On the 22nd the daily application of the x rays was begun and rapid improvement occurred. On the 26th the yellow colour of the skin was much diminished

and the condition of the blood was improved. On July 30th the patient was discharged looking and feeling well. The spleen was still enlarged though smaller than before. The red corpuscles numbered 4,260,000 and the white 4200; the hæmoglobin amounted to 62 per cent. The treatment of splenic anæmia generally is unsatisfactory. An Italian physician, Dr. Bozzolo, has recorded three cases of Banti's disease (the form of splenic anæmia with which Dr. Bramwell's case corresponds) in which great improvement took place under the x rays. He states that the action is slower than in leukæmia.

THE HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, BROMPTON.

DURING the second half of the winter session, 1905–06, a series of lectures and demonstrations will be delivered at 4 P.M. on Wednesdays to March 28th inclusive. The subjects taken on each date will be as follows. On Feb. 21st, Bronchiectasis, by Dr. R. Maguire; on Feb. 28th, a demonstration of Clinical Cases, by Dr. S. H. Habershon; on March 7th, Types of Pulmonary Tuberculosis, by Dr. Horton-Smith-Hartley; on March 14th, Mitral Stenosis, by Dr. Hector Mackenzie; on March 21st, the Selection of Cases for Sanatorium Treatment, by Dr. Arthur C. Latham; and on March 28th, the Characters and Causes of Cough in Children, by Dr. R. A. Young. The lectures are free to all qualified medical practitioners and to students of medicine.

THE TREATMENT OF DIABETES MELLITUS BY ACID EXTRACT OF DUODENAL MUCOUS MEMBRANE.

AMONGST some interesting papers on bio-chemical subjects contributed to the first number of the *Bio-Chemical Journal*, which will be published in monthly numbers by the bio-chemical department of the University of Liverpool, is one under the above heading by Professor Benjamin Moore, Dr. Edward S. Edie, and Dr. John Hill Abram. It has been clearly shown by Bayliss and Starling,[1] that the activity of the pancreas, so far as its external secretion is concerned, is normally called forth by chemical agency by means of a substance termed by these investigators *secretin*, which is formed by the cells of the duodenal mucous membrane and carried to the pancreatic cells in the blood stream. If it be accepted that the duodenum yields a chemical excitant for the internal secretion of the pancreas and that in the absence of the internal secretion glycosuria results, then, as is suggested in this recent paper, there are three places in the chain at which weakness due to functional or other disarrangement may occur and lead to a breakdown and the appearance of diabetic conditions. This breakdown may occur at the duodenum on account of the non-secretion of the excitant, or may take place at the pancreas, as although the excitant is formed and carried to the pancreas these cells may not be capable of excitation either from complete morbid change or from some functional alteration in their metabolism; or there is the possibility that even when the duodenum is normal and supplying its excitant and the pancreas is also normal, yielding as a result of excitation its internal secretion, yet there are changes in the oxidising tissues, such as the liver or the muscles, which prevent the oxidising function of these from coming into operation. It follows that only in the first class of case could benefit be expected to follow in a diabetic patient from administration of extracts of duodenum. The number of cases published in this paper which were treated with the acid extract of duodenal mucous membrane was only three,[2] but the results obtained were decidedly encouraging, especially as two of the patients were quite young, in which case the prognosis is generally held to be unfavourable. In these cases the amount of sugar was very high and yet the complete absence of sugar rapidly followed the use of the extract. It is suggested that the cause of the glycosuria in these cases is due to the failure of the chemical excitant from the duodenum and that this in the end would lead to permanent abolition of the internal secretion of the pancreas. The stimulant to the pancreas re-starts the internal secretion and since the glycosuria does not reappear on ceasing to give the extract the administration appears to stimulate the functional activity of the duodenum. It is admitted, however, that further watching is required and a larger number of cases must be placed under observation before definite conclusions can be drawn.

[1] THE LANCET, August 6th, 1904, p. 387.
[2] THE LANCET, Jan. 27th, 1906, p. 220.

CHILDREN WHO ARE SPEECHLESS BUT HAVE HEARING.

AN annotation under this heading which appeared in our issue of Jan. 27th, p. 241, described a curious type of abnormal cerebration exemplified by children whose action can be controlled by spoken words, although they neither speak themselves nor make any response in words. Owing to their possession of the faculty of hearing these children are not provided for under the Act relative to the education of blind and deaf children. As the Education (Defective and Epileptic Children) Act, 1899, requires the school authorities to determine what children are defective, no comprehensive scheme of policy has been arrived at and there is often a difficulty in providing the special form of training necessary for these children. Progress in this direction would be facilitated by teachers becoming acquainted with the rudiments of psychology and cerebral physiology and a course of eight lectures with this object in view is being delivered by Dr. G. E. Shuttleworth. The earlier lectures have been given at 36A, Longridge-road, Earl's Court, London, S.W., on Wednesdays, at 8 P.M., and the last three, on Types of Mentally Defective Children, Methods of Training, and General Management, will probably be given at Ealing on Thursday afternoons. For terms and particulars application should be made by letter to Miss Bertha James, at the above address, which is the headquarters of the "Society of the Crown of our Lord," an organisation for the benefit of the mentally afflicted.

THE INSANITARY CONDITION OF IMMIGRANT SHIPS.

ATTENTION was drawn in THE LANCET of Feb. 3rd, p. 331, to the fact that all the immigrant ships which come into the Port of London fly foreign flags and that some of them are in a particularly filthy state. Emphasis has been placed upon these statements by the recent publication of the report to the Corporation of London of Dr. Herbert Williams, medical officer of health for the port, who deals fully in an interesting document with the medical inspection of aliens. Since the new Aliens Act has come into force the report states that on the whole the medical inspection of immigrants has worked very smoothly. Up to the time of the publication of the report and since Jan. 1st 33 immigrant ships have entered carrying 1184 aliens in the steerage, of whom 17 have been rejected as "undesirable" from a medical standpoint. Ten of these have been permitted to land by the Immigration Board, while seven have been deported. From reports made by the sanitary authorities in regard to the accommodation provided for aliens and the general conditions on some ships the medical officer gives extracts. These go to show that reforms are here considerably

needed. It appears, for instance, that in a vessel sailing from St. Petersburg, with 305 aliens aboard, an especially filthy state prevailed. Both air space and floor space were palpably insufficient and no provision was made for the separation of sexes. The lighting and ventilation were inadequate and provisions scanty. Another very objectionable feature of many of the Russian immigrant ships running to London appears to be that the after main deck is frequently occupied by horses so that in the case of bad weather the passengers must be confined to their quarters. Dr. Williams recommends that the facts should be reported to the Board of Trade and to the Russian Consul-General in London. We have had an opportunity through a representative of inspecting one of these ships and certainly the state of affairs described in the reports received by Dr. Williams cannot have been exaggerated. The lavatory accommodation for females in one ship which our representative inspected is not fit for description even in a medical journal.

WE are informed by the Director of Auxiliary Forces that "Surgeon-Captain and Honorary Surgeon-Major Richard Charles Mason Pooley, late 1st Volunteer Battalion the Duke of Cornwall's Light Infantry, possesses the Volunteer Officers' Decoration." We are happy to give publicity to the fact—the same publicity as we have already given to our statement of inability to find any official record of the granting of the honour.

BEFORE the Fifteenth International Congress of Medicine Professor Rubert W. Boyce, F.R.S., will give an address on the Prophylaxis of Yellow Fever as the Result of the 1905 Epidemic in Central America and New Orleans. This address will take the place of the communication promised by Sir Patrick Manson, who is unavoidably prevented from attending the meeting at Lisbon.

THE King has given to Mr. Reginald Harrison, F.R.C.S. Eng., His Majesty's Royal licence and authority to accept and to wear the Insignia of the First Class of the Imperial Ottoman Order of the Medjidieh, conferred upon him by His Highness the Khedive of Egypt, authorised by his Imperial Majesty the Sultan of Turkey, in recognition of valuable services rendered by him.

THE medical officer of health of the Cape Colony reports that for the week ending Jan. 20th the condition of the Colony as regards plague was as follows. No case of plague in man or other animal was discovered throughout the Colony except at Port Elizabeth, where 7 rats and 1 mouse were found to be plague-infected.

Dr. William Alexander Osborne, professor of physiology and histology in the University of Melbourne, has been appointed by the Senate to represent the University of London and to present an address at the forthcoming celebration of the jubilee of the University of Melbourne in April next.

THE death-rates from pulmonary tuberculosis in England and Wales during the years 1903 and 1904 will be of interest to our readers. For 1903 the death-rate per 1,000,000 was 1203; for 1904 it was 1236; but the latter figure is given subject to correction.

THE anniversary dinner of the Medical Society of London will be held at the Whitehall Rooms, Hôtel Métropole, on Wednesday, March 14th, at 7.30 P.M.

ON PHYSICAL TRAINING IN SCHOOLS.[1]

BY W. P. HERRINGHAM, M.D. OXON., F.R.C.P. LOND.,
PHYSICIAN TO, AND LECTURER ON FORENSIC MEDICINE AT, ST. BARTHOLOMEW'S HOSPITAL.

THE main object of the National Service League is to advocate universal military training for adults as the only means of rendering the empire secure, but we understood that you did not wish to hear about the military needs of the country so much as about the physical education of boys and girls. This we also advocate both as a matter of public health and as a preparation for the citizen army of the future. For this reason the league deputed an expert in physical education, Mr. Horsfall, and a physician, myself, rather than a soldier to address you.

THE chief methods of physical education are: (1) games; (2) athletic sports, swimming, and such other exercises as are pursued for pleasure; (3) physical drill and gymnastics; and (4) military drill and rifle practice. I propose to discuss the effect of each of these classes separately.

1. *Games*.—These are the distinctive feature of English school life and ought always to hold the foremost place. Pleasure is an enormous advantage to any sort of education and no other physical training gives anything like so much pleasure as games. They are the natural exercise for children and they are played in the open air. They have a very good effect upon the body. They train the limbs more than the chest or trunk but they produce a quickness of eye and of hand which no other exercise can give. In physiological language they improve the nervous reflexes. They have also an excellent effect upon character. In playing games boys learn physical courage, honour, self-reliance, and a certain amount of public spirit. They also learn to obey the law. Mr. Dowding[2] gives a delicious example from a small boys' game: "Please, Sir, need I go out? The umpire called wide and then gave me out leg before," which must be familiar to all who have played village cricket. I do not think many cricketers would be found among passive resisters. They would rather say with the Archbishop of Canterbury that our first duty is to obey the law and then to get it altered if necessary.

I think it is a pity that so many prizes and cups are given and that such a premium is put on skill in games. It rather destroys their natural character and tends to make boys think that games are better than learning and that the morality of games is the highest they need aim at. But parents are more to be blamed for this than boys and after all it is a small defect compared to the immense good they do. I really do not think I need say much more in their behalf. Both France and Germany have recognised their importance and are beginning to copy our system by introducing them.

They have, of course, some defects. I have already said that they do not develop all parts of the body alike. It is sometimes said that they are dangerous. But I believe this is entirely untrue so far as boys are concerned. I have seen a boy break his leg at football, but far more accidents happen when boys are not playing games than when they are. I do not take an exaggerated view of their moral effect. It is quite possible to be a good player and a great blackguard. Indeed, I think Mr. Benson[3] is quite right in saying that the adulation which a very good player excites brings with it certain temptations and certain facilities for evil. But as he and everyone else allows, the greatest danger of all is loafing, and games are the best safeguard against loafing which schoolmasters possess.

One point more. Boys who are hard at work want recreation in the strict sense of the word, something to refresh them and to remove the fatigue of intellectual effort. A hard game is itself exhausting and does not make a boy immediately ready for another hour's work. But ten minutes fooling with a small football for boys, or with a skipping-rope or battledore and shuttlecock for girls, is nothing but refreshing and intervals of this sort of play ought always to be inserted between lessons. An hour is

[1] Being the opening address on a discussion on Physical Training in Schools, delivered on Feb. 15th, 1906, before the Medical Officers of Schools Association.

[2] Parliamentary Papers, Special Reports, 1900, vol. xxii., Part ii., p. 343.

[3] Ibid., p. 475.

too long for a lesson. The last quarter is pure waste and had much better be given to recreation. But neither physical drill nor any other form of exercise than sheer play can give it.

2. *Athletic sports.*—Races and jumping enter so little into the ordinary life of boys that they need not be discussed at length. They form a centre of interest for a few during a short time of the year and that is all. I do not think at all highly of their effects and I think that long races are rather harmful than otherwise. Similarly school runs ought to be strictly graduated. The late Mr. Almond used to turn his boys out in sweater and flannels on a wet day when they could not play games and make them take an hour's exercise of mixed running and walking. The same system is adopted now in other schools, at Winchester for instance. This seems to me an excellent plan. Swimming ought to be taught to every boy, but much more for its use than for its physical effect. It is very hard work, but speaking as a good swimmer myself I am sure that it is not very good as exercise. It is very tiring without being at all refreshing. Bicycling is simply an amusement.

3. *Physical drill.*—By this is meant a set of exercises, performed to order, either with no apparatus at all, or with moveable things like dumb-bells and Indian clubs, and not with any fixed apparatus like bars, horses, ladders, or ropes. There are any number of such courses set out in text-books. The London School Board uses Mr. Chesterton's, the Birmingham Board uses Carter and Bott's, Leeds has one of its own, and so on. The basis of all is the Swedish principle. The children are not taught to perform feats of strength but are put through certain movements in order to develop their bodies. There are breathing exercises, to make them breathe through the nose and to expand the chest, which are given separately and in combination with others. There are head movements, to strengthen the neck muscles, arm movements, trunk movements, leg movements, movements combining the trunk and arms and the legs and arms, balance movements and others. A certain amount of marching, turning, and forming of lines goes with them to get the children into position. The whole is excellently adapted to develop every portion of the body. This is sometimes called "military drill" or "physical drill of a military character." There is, however, nothing military about it except that, since it is an excellent training, it is used in the services. These certainly supply a want even when games are played. Games develop the legs but they have little effect on the arms, the chest, or the trunk. Yet these parts are as valuable as the legs, and, accordingly, when, as in the army and navy, the aim is to get general strength and development this physical drill is regularly and systematically employed. There are hardly any statistics of the effect upon children of physical drill. The work is so little that not much change is to be expected and the natural growth at that age is rapid. What few there are [4] tell distinctly in its favour even so.

In the navy there are regular records for recruits of 17 and 18 years of age. In a group of 32, the figures of which I have before me, two classes, the course lasting three and a half months, the averages are:—

	Age.	Weight.	Chest girth.
Begins	17·11 ...	125½ lb. ...	32·8 in.
Ends	18·2 ...	131 ,, ...	34·5 ,,

Four out of the 32 lost weight, the rest all gained. Only one did not gain in chest girth.

I think all boys and girls ought to go through these exercises and ought to be taught that it is their proper ambition to develop their bodies and to be as well grown and strong as they can. Almond used to speak of it as a religious duty and of loafing and bad hygiene as physical sin. Where, as in elementary schools, games are little played physical drill is still more necessary, and it ought always to take place in the open air if possible. If it is to have a full effect it must be properly taught and properly done. The exercises can be easily performed in such a way as to be of no real benefit. The teachers must therefore understand the principles of it themselves and must see that it is carried out accurately. Also, it ought to take place every day and for a certain time. In the report of the Royal Commission on Physical Training (Scotland) the teachers and inspectors were quite unanimous in its favour. They said it improved discipline and developed the children's bodies. But they nearly all of them said that they could not give more than half an hour a week to it because of the multiplicity of the subjects which the children had to learn. Leeds, again, gives half an hour a week.[5] That amount of time is simply ridiculous. Birmingham[6] gives one hour and 40 minutes, which is better though still insufficient. Before the Royal Commission on Physical Training Mr. Wickham, head master of Twyford, said that he gave about two hours a week to it and was prevented from giving more by the requirements of the public schools. The evil lies in these. The number of subjects which they require boys to know is simply dissipating and though, if I may judge from Mr. Benson's remarks,[7] the bad effect is to some extent recognised, yet there is no doubt that a great deal remains to be done to simplify education.

When boys get older and have a real wish to develop themselves there is nothing equal to Sandow's system. He teaches very slow, even, and strong movements against the resistance either of the opposing muscles or of apparatus. It is very hard work and on that account unsuitable for children but it is excellent exercise, producing a feeling of vigour and good health, and its results are really surprising. The following are the measurements of a young man, aged 20 years, before and after 23 lessons.

Date.	Neck.	Chest. Contract.	Chest. Expand.	Right arm.	Right forearm.	Waist.	Right thigh.	Right calf.	Weight.
29/10/03	14½	36¼	39	12½	10½	29¼	22½	13¼	11st. 11lb.
10/12/03	14½	38	42½	15	11½	30	23½	13½	11st. 11lb.

The great fault about physical drill is that it is uninteresting. It is a lighter lesson than the others and better liked. But still it is a lesson and no recreation. Griesbach and Wagner[8] found with the æsthesiometer that it did not perceptibly improve the cutaneous sensation which greatly deteriorates with intellectual fatigue, and Kemsies found with the ergograph that an hour's physical drill was as exhausting as an hour's mathematics. Mr. Sharples[9] says that the institution of football competitions for elementary schools which is entirely owing to the school teachers—I believe they are some of the most devoted people in the country—has done more for the boys than all the drills and calisthenics put together. I think he is perfectly right. Mr. Wickham says practically the same thing. But no one would compare physical drill for a moment to games. It is a necessary supplement to games and it is the more necessary the fewer games there are. It cannot possibly take their place.

Gymnastics in which bars, ropes, horses, and other fixed apparatus are employed should not be taught seriously to children under 14 years of age. Their muscles are not strong enough and they strain themselves. But there is nothing they enjoy more than fooling about with a few ropes and swings and this, which Mr. Wickham[10] calls the monkey-house use of the gymnasium, is a first-rate form of play. When seriously taught gymnastics produce great precision of movement, develop the shoulders well, and give men a good deal of pluck. A striking instance is given by Sir Ian Hamilton.[11] The cadets of Potsdam are, he says, much better trained than ours at Sandhurst. One of their exercises is to go up on a platform 15 or 18 feet high, stand on their heads on the edge of it, and throw themselves off it backwards on to some soft earth beneath. That is a special exercise to teach them pluck and there is no question about the pluck required to do it. Gymnastics are interesting and boys like them. At Winchester every boy is put through two terms of gymnasium and has to pass a certain standard. This is really physical drill with a few gymnastics added. A certain number of boys, Mr. Furley tells me, take the gymnasium as their regular form of exercise, preferring it to games. When he and I were in college together there were no

[4] See Royal Commission on Physical Training, vol. i., Appendix pp. 39-44 and 59.

[5] Parliamentary Papers, Special Reports, 1898, vol. xxiv., p. 218.
[6] Ibid., p. 207.
[7] Loc. cit.
[8] Parliamentary Papers, Special Reports, 1902, vol. xxvii., p. 528; Parez on the Measurement of Mental Fatigue in Germany.
[9] Parliamentary Papers, 1898, vol. xxiv., p. 159.
[10] Ibid., 1900, vol. xxii., p. 327.
[11] Royal Commission on Physical Training, 1903, vol. ii., p. 309.

gymnasium and no physical drill; when we were not playing games we could loaf without let or hindrance. But things are very different now. My house physician, Dr. J. G. Slade, who is an old Wykehamist, tells me that in his house boys had to keep a regular record of their exercise. If they did not take enough in games they had to make it up in "runs." This shows the advance that has been made in well-organised and progressive schools.

4. *Military drill (by which is meant movements necessary for war) and rifle practice.*—These we advocate for all schoolboys after the age of 16 years as a preparation for the adult military training that we wish to make universal. I do not think that it has any special merit different from other exercises in developing the body, but shooting is good training for the eye and is interesting in itself. I think myself that we do not teach boys citizenship half enough and that military drill gives them a sense that they have a duty to the country which is not completed by the payment of rates and taxes.

Having thus said what each form of training can effect let me put it another way and say what I should give a boy or girl so long as I had to educate him or her. My fellow parents will agree with me that after the child reaches a certain age it is the parents who get the education. Up to six or seven years childish games are all they want, except that they should be taught to breathe properly. From seven to 14 they ought to have all the organised games they can with children of their own size and regular systematic physical drill for 20 minutes a day at first, gradually increased to nearly an hour by the time they reach 14, and monkey-house work as part of their play. At 14 add gymnastics under proper instruction. I should not carry these to any great length unless a boy chose it for himself. At 16 I should give him a course of Sandow, and when he has learnt the system should encourage him to spend ten minutes over it morning and evening. And at the same age I should teach him the use of the rifle. But games always and throughout. The same for girls, except that I should let them play hockey instead of football. But I would make this difference between physical drill and games. I would compel every child, after medical examination, which should be universal when compulsion is in force, to go through the physical lessons and I would compel every boy to play games who could not show a reason against it. For the few boys who have strong interests in other directions, such as natural history or workshop work, I would always reserve the power of dispensation. The great feature of games is pleasure, and when a boy does not get the pleasure and will take healthy exercise elsewhere I would let him follow his bent.

Education and the War Office are the two things about which we are all agreed. We all think that they are as bad as they can be and that we could put them to rights if we had a proper opportunity. This much I think we ought to do. We ought to impress upon education authorities the folly of overloading the intellectual and undervaluing the physical side of education, to do all that lies in our power to get proper playgrounds and proper play for poor children,[12] and to bring before the elementary, public, and preparatory schools the necessity of supplementing games by regular physical drill.

[12] If the wicked man left a fund to provide battledores and shuttlecocks and small footballs for elementary schools I should let him off more purgatory than I should for most other charitable bequests.

JAPANESE NAVAL SURGERY.

THE following is an abstract of a communication recently made to the Association of Military Surgeons of the United States by Surgeon-in-Chief Suzuki of the Japanese navy, adapted from the French of Dr. Y. Alvernhe in the *Archives de Médecine et de Pharmacie Militaires* for December, 1905.

In February, 1904, before Admiral Togo's fleet left Sasebo, the principal medical officer, Surgeon-in-Chief Suzuki, gave orders to all the medical officers serving under him that the aseptic treatment of wounds was to be made the rule. Conservative surgery was to be adopted as far as practicable; no amputations that could reasonably be postponed were to be performed on board ship and all men whose injuries involved withdrawal from their duty were to be transferred to hospitals ashore as rapidly as possible in the vessels that were specially detailed for that purpose. In spite of the difficulty, almost amounting to impossibility, of applying strict asepsis during a naval engagement, that ideal was continually before the eyes of the Japanese surgeons. They strove incessantly, if not to attain, at least to approach within measurable distance of their object. During the period from February, 1904, to August, 1905, while active operations were in progress, 1891 deaths took place in Admiral Togo's fleet, of which the average strength was 23,506 men of all ranks; but of these fatalities no fewer than 1445 were due to the sinking of vessels by submarine mines. The wounded amounted to 1791, of whom 117, or 6·5 per cent., subsequently died, bringing the total mortality up to 2008, which gives a death-rate on the average strength of 8·5 per cent. The following table shows the numbers killed and wounded in the various engagements, together with the results in the latter category:—

Date of engagement.	Killed in action.	Wounded.	Total.	Disposal of wounded.			
				Died.	Recovered.	Invalided.	Remaining.
Feb. 9th, 1904	3	69	72	6	59	3	1
August 10th, 1904	65	161	236	6	133	17	5
,, 14th, ,, ...	36	96	132	10	80	3	3
Port Arthur, June 26th to 1904, to Dec. 31st, 1904	30	313	343	27	258	20	8
May 27th, 1905	88	611	699	29	470	—	112
Minor engagements and submarine mines* ...	1669	541	2210	39	470	37	2
Total	1891	1791	3682	117	1470	73	131

* 1445 lives were lost through the sinking of vessels presumably in consequence of injury inflicted by submarine mines.

The system of asepsis as now generally practised was adopted by all Admiral Togo's medical officers; steam sterilisation of dressing materials which were then stored in metallic boxes; disinfection of instruments in boiling water, to which some carbonate of soda had been added; disinfection of the surgeon's hands and also of the patient's skin in the vicinity of his wound by cleansing with soap and brush in sterilised water, followed by washing with a solution of corrosive sublimate, and finally by rinsing with some more sterilised water. Whenever it was not possible to carry out this procedure in its entirety the parts adjacent to the wound were bathed with absolute alcohol.

What ought to be the surgeon's duty during a naval engagement? When should it begin? How soon is it possible for it to begin? Dealing with this important, but still undetermined, question in the light of his recent experience Surgeon-in-Chief Suzuki gives it as his opinion that although the surgeon may not be completely stationary during the first phase of a combat—that is to say, whilst the firing still continues—his opportunities for profitable intervention will not amount to much more than the arrest of hæmorrhage, the dressing of wounds of the soft parts, and the application of a few simple appliances. And even such assistance can only be rendered effectively in the case of wounded men who may be able to make their way to the sick bay unassisted or who can find comrades able and willing to carry them there. Surgery, properly so-called, can only be attempted when the second phase has commenced. As soon as the firing is over the surgeon can examine the serious cases and extract fragments of shells that are easily removable, as well as pieces of clothing or other foreign bodies that have been forced into the wound. If possible he should close wounds that gape by means of sutures, for experience shows that obturation often exercises a happy influence upon their progress and tends to bring about union by first intention. In complicated fractures the medical officer should content himself with the abstraction of loose pieces of bone and leave *in situ* all that would need force for their removal. But even during the comparative freedom and quiet of the second phase the surgeon must confine himself strictly to work that cannot be postponed; he must not attempt any operations. It is far better to minister to the pressing needs

of the wounded in general and so to enable them to undergo expeditious transference to a hospital ship than it is to lose precious time over a surgical operation, even though from the point of view of the patient it may be highly desirable to perform one.

Every vessel engaged under Admiral Togo had a sufficient supply of suitable dressing materials. This most important detail was very efficiently carried out; at no time during the operations, even after the great battle of May 27th and 28th, 1905, when the Japanese had to provide for a large number of wounded Russians, was there any serious deficiency or inconvenience in this respect. Packets for first aid in the navy differ essentially from those used in the army because wounds received in sea fights are generally more extensive than those received on land. At first the packets issued to Admiral Togo's fleet were too small, being only about three and a half inches long by two and a quarter inches wide. After the battle of Feb. 9th, 1904, it was noted that two or three packets were frequently required for a single dressing. This led to great loss of time, more especially as the wounds in addition to being large were often multiple, so orders were given for the immediate manufacture of an improved supply. The new packet was prepared in a wonderfully short time and gave complete satisfaction. It is about four and a half inches square and contains sublimated gauze compresses wrapped in tough Japanese paper and further enveloped in a specially prepared material known as "shibukami."

In spite of the hardship and fatigue inseparable from active service the sanitary condition of Admiral Togo's command was satisfactory to a remarkable extent, the sick-rate for the entire period having been lower than the average of the three preceding years.

In the Japanese navy the ordinary ration is as follows:—

Daily.

Biscuit	6 ounces.	Dry vegetables ...	3 ounces.
Or bread	8 ,,	Or fresh ,, ...	15 ,,
Rice	12 ,,	Fish, dry or preserved	5 ,,
Barley flour	5 ,,	Tea...	½ drachm.
Preserved meat ...	5 ,,	Parched barley	1 ,,
Or fresh ,, ...	7 ,,	Sugar	6 ,,

Weekly.

Peas or haricots ...	2½ ounces.	Vinegar	½ ounce.
Wheat flour	2 ,,	Oil of sesame	1 drachm.
Sugar	3½ ,,	Salt	1½ ounces.
Soy	3 ,,	Suet	1 ,,

Additional for Supper.

Biscuit	4 ounces.	Tea	½ drachm.
Or bread	5 ,,	Sugar	4 ,,

During the war the above items were increased by one-fifth, all, that is, except the rice, of which the allowance continued to be 12 ounces. The fleet was provisioned by two ships specially allocated for this service. Each ship was fitted with refrigerating appliances and cold storage. They visited the mainland alternately and also drew supplies from transports. Never at any time, even during the season of fogs, had the sailors to put up with short commons, though occasionally in detached cruisers the fresh ingredients were lacking. The water-supply was excellent and ample, in fact abundant, sufficing not merely for drinking and culinary purposes but also for ablution. After a salt-water bath the men were always able to obtain a supplementary douche with fresh water. The surgeon-in-chief attributes the complete immunity of the fleet from the boils and blains usual so prevalent during warlike operations by sea or land to the copious water-supply.

Clothing suitable for extreme cold in winter and great heat in summer was provided for all ranks, officers as well as men. The results of this wise precaution are very evident. Never has the sequence of cause and effect been demonstrated with greater clearness. In spite of the rigour of the winter climate frost-bite was almost unknown and not a single man had to go to hospital on account of it. In the same way sunstroke was conspicuous by its absence during two hot seasons. No one suffered from it either on deck or in the stoke-hold. The stokers all drank fresh distilled water as a rule, but by way of a treat they were allowed now and then to mix with it a little arrowroot and sugar.

Two hospital ships, named respectively *Kobe-Maru* and *Saikio-Maru*, were attached to Admiral Togo's fleet, each making up about 168 beds. It was thought best to have two ships of moderate size (about 3000 tons) rather than one of large dimensions. Sick and wounded men were transferred in steam launches, the ordinary hospital cot being utilised for the journey. In the opinion of Dr. Alvernhe there was room here for improvement, a hammock being by no means a good appliance in the circumstances. Judging by the results, however, the system of removal adopted by the Japanese undoubtedly succeeded very well.

But perhaps the most remarkable thing in this wonderful war was the rareness of infectious disease. Typhoid fever and dysentery alone occurred and in neither case to an alarming extent. Before the war broke out there were some sporadic cases of typhoid fever in the fleet and afterwards a similar condition of things prevailed. At no time were there more than three or four men under treatment for the disease in any of the war vessels. In all there were 241 cases, which gives an annual sick-rate of 7·2 per 1000 of strength. The dysentery cases numbered 151 in all. They took place for the most part during the months of August and September, 1904, in the vessels blockading Port Arthur. The propagation of this affection is said to have been due to the swarms of flies with which the vessels were infested.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on Feb. 8th, Mr. JOHN TWEEDY, the President, being in the chair.

A report was read from the court of examiners respecting 99 candidates found qualified for the diploma of Member and it was resolved that diplomas of Membership should be issued to these candidates.

It was resolved that diplomas of the Licence in Dental Surgery should be issued to three candidates found qualified.

It was resolved that diplomas in Public Health should be issued, jointly with the Royal College of Physicians of London, to 18 candidates found qualified.

It was resolved that the Vicar of Hempstead should be informed that the College will contribute ten guineas towards the rebuilding of the tower of Hempstead Church, where William Harvey is buried, provided that a sufficient sum for the purpose is raised.

Dr. J. Ward Cousins was reappointed as the representative of the College on the Central Midwives Board.

It was resolved to hold an afternoon reception in the Museum for the members of the British Dental Association on the occasion of the meeting in London in May next.

Professor HOWARD MARSH gave notice of the following motion for the next meeting of the Council:—

That the time has come for reconsidering the question of the admission of women to the examinations of the Conjoint Board.

MEDICINE AND THE LAW.

Certification of the Cause of Death.

AT a recent inquest at Bermondsey it was alleged that the deceased had been placed in his coffin before life was actually extinct and an attempt was made to fix the responsibility for this upon the medical attendant of the deceased because he had given a certificate of the cause of death without inspecting the body. The evidence as to the continuance of life fell far short of proving this to have been the fact and was given by a witness related to the deceased who was stated to have made similar allegations upon another like occasion. As a matter of fact, however, Mr. George Burton of Wanstead, the medical practitioner who attended the deceased, had seen him last when he was at the point of death and before quitting the house had asked a friend of the wife to prepare her for what he knew must inevitably ensue. He was afterwards informed, as is perfectly usual, that the deceased was dead, and granted in the prescribed manner a certificate of the cause of death. The story of the female witness already mentioned as to what she believed that she observed subsequently to this was the cause of an inquest being held and was also responsible for a rider added by the jury to their verdict, apparently with the acquiescence of the coroner, to the effect that Mr. Burton ought to have inspected the dead body before certifying.

Blame of this kind made public by sensational reports in newspapers inflicts considerable hardship upon medical men, is highly unjust, and is based upon a misapprehension of the legal position. Every medical man is familiar with the form of death certificate issued to him officially (under the Registration of Births and Deaths Act, 1874), which does not in any way make it obligatory for him to view the dead body, but on the contrary provides for his not having done so. It is a certificate of the cause of death, not of the fact that it has taken place, and if the relatives desire that the medical man should see the deceased before granting it, it is for them to summon him to do so. If they are content that he should not do so, the responsibility, if any, rests with them. The law, however, only requires that they should inform the registrar that the death has taken place and deliver to him a certificate of the cause of it, which they are to obtain from a medical practitioner should there be one who can furnish it. Mr. Burton therefore acted absolutely correctly and the censure conveyed in the rider of the jury at the inquest referred to was wholly undeserved.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

A QUARTERLY meeting of the Royal College of Physicians of Edinburgh was held on Feb. 6th, Dr. JOHN PLAYFAIR, the President, being in the chair.

Dr. George Freeland Barbour Simpson, Dr. Charles Mowbray Pearson, and Dr. Edwin Matthew were introduced and took their seats as Fellows of the College.

Dr. Andrew Balfour (Khartoum) and Dr. John Dixon Comrie (Edinburgh) were admitted by ballot to the Fellowship of the College.

Dr. William Leslie Lyall (Edinburgh) and Mr. Sorab Kaikhoshru Engineer (Portobello) were admitted by ballot to the Membership of the College, after examination.

The REGISTRAR reported that since the last quarterly meeting 26 persons had obtained the Licence of the College by examination.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8603 births and 4711 deaths were registered during the week ending Feb. 10th. The annual rate of mortality in these towns, which had been 15·8, 15·9, and 15·5 per 1000 in the three preceding weeks, was again 15·5 per 1000 last week. In London the death-rate was 14·9 per 1000, while it averaged 15·9 in the 75 other large towns. The lowest death-rates in these towns were 8·4 in Willesden, 8·6 in Walthamstow, 9·2 in East Ham and in Reading, 9·3 in Leyton and in Hastings, and 9·6 in Hornsey; the highest rates were 20·0 in Rhondda, 20·5 in Coventry, 20·8 in Great Yarmouth, in Plymouth, and in Burnley, 21·1 in Warrington, 21·2 in Liverpool, 22·8 in Preston, and 24·2 in Merthyr Tydfil. The 4711 deaths in these towns last week included 399 which were referred to the principal infectious diseases, against 369, 385, and 366 in the three preceding weeks; of these 399 deaths, 130 resulted from whooping-cough, 76 from diphtheria, 69 from measles, 58 from diarrhœa, 44 from scarlet fever, and 22 from "fever" (principally enteric), but not any from small-pox. No death from any of these diseases was registered last week in Hornsey, Hastings, Northampton, Great Yarmouth, Burton-on-Trent, Coventry, Wigan, Bury, and Rotherham; while they caused the highest death-rates in Croydon, Plymouth, Wolverhampton, Leicester, Rochdale, Burnley, Preston, and Merthyr Tydfil. The greatest proportional mortality from measles occurred in Croydon, Tottenham, Preston, Leeds, and York; from diphtheria in Croydon, Reading, Hull, Middlesbrough, and Merthyr Tydfil; from whooping-cough in Plymouth, Birmingham, King's Norton, Aston Manor, Leicester, Warrington, Rochdale, Burnley, and Gateshead; and from diarrhœa in Rochdale. The mortality from scarlet fever and from "fever" showed no marked excess in any of the large towns. No death from small-pox was registered last week in any of the 76 towns, and no cases of this disease were under treatment last week in any of the Metropolitan Asylums Hospitals. The number of scarlet fever cases in these hospitals and in the London Fever Hospital, which had been 3066, 2983, and 2912 on the three preceding Saturdays, had further fallen to 2839 on Saturday last, Feb. 10th; 283 new cases were admitted during the week, against 323, 322, and 319 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 299, 293, and 313 in the three preceding weeks, declined again to 278 last week, and were 98 below the corrected average number in the corresponding periods of the four preceding years. The causes of 46, or 1·0 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in West Ham, Portsmouth, Bristol, Manchester, Salford, Bradford, Leeds, Hull, Newcastle-on-Tyne, and 49 other smaller towns; the largest proportions of uncertified deaths were registered in Burton-on-Trent, Birmingham, Nottingham, Liverpool, St. Helens, Warrington, Blackburn, Sheffield, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 18·2, 19·6, and 16·5 per 1000 in the three preceding weeks, rose again to 16·8 per 1000 during the week ending Feb. 10th, and was 1·3 per 1000 in excess of the mean rate during the same period in the 76 large English towns. Among these Scotch towns the death-rates ranged from 14·5 in Leith and 15·0 in Paisley, to 20·6 in Dundee and 21·1 in Perth. The 577 deaths in these towns last week included 18 which were referred to measles, 15 to diarrhœa, four to whooping-cough, four to "fever," three to scarlet fever, and three to diphtheria. In all, 47 deaths resulted from these principal infectious diseases last week, against 53, 69, and 47 in the three preceding weeks. These 47 deaths were equal to an annual rate of 1·4 per 1000, which was slightly above the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of measles, which had been 24, 31, and 18 in the three preceding weeks, were again 18 last week, and included 14 in Glasgow and two in Dundee. The deaths from diarrhœa, which had been 19, 13, and 18 in the three preceding weeks, declined again last week to 15, of which six occurred in Glasgow, five in Dundee, and three in Edinburgh. The fatal cases of whooping-cough, which had been seven and six in the two preceding weeks, further declined to four last week, and included three in Glasgow. The deaths referred to different forms of "fever," which had been four and one in the two preceding weeks, rose again last week to four, of which two were registered in Glasgow. The fatal cases of scarlet fever, which had been three, two, and none in the three preceding weeks, rose again to three last week, and all occurred in Glasgow. The deaths from diphtheria, which had been five, 12, and four in the three preceding weeks, further declined last week to three, of which two were registered in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 114, 110, and 113 in the three preceding weeks, declined again to 108, and were 22 below the number in the corresponding period of last year. The causes of 23, or 4 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 20·1, 21·2, and 24·4 per 1000 in the three preceding weeks, declined again to 20·5 per 1000 during the week ending Feb. 10th. During the past four weeks the death-rate has averaged 21·6 per 1000, the rates during the same period being 15·1 in London and 17·9 in Edinburgh. The 149 deaths of persons belonging to Dublin registered during the week under notice were 28 below the number in the preceding week and included one death from "fever," but none from small-pox, measles, scarlet fever, diphtheria, whooping-cough, or diarrhœa; in each of the two preceding weeks there were five deaths from these principal infectious diseases. The mortality from "fever" in Dublin last week was equal to a rate of 0·1 per 1000, the death-rates during the same period from the principal infectious diseases being 1·2 in London and 0·6 in Edinburgh. The 149 deaths in Dublin last week included 23 of children under one year of age and 44 of persons aged 60 years and upwards; the deaths both of infants and of elderly persons were considerably below the respective numbers recorded in the preceding week. Nine inquest cases and five deaths from violence

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING JANUARY, 1906.

(*Specially compiled for* THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1906.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of Infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,721,217	1	1699	757	1	119	1	31	446	—	3055	6·7	—	240	54	72	158	—	15	—	60	597	1·3	7291	16·0	132
West Districts.																										
Paddington	148,913	—	19	18	—	4	—	1	8	—	50	3·5	—	2	1	1	3	—	1	—	4	12	0·8	182	12·7	85
Kensington	180,932	—	22	14	—	7	—	4	11	—	58	3·3	—	4	—	1	2	—	1	—	2	10	0·6	234	13·5	107
Hammersmith	120,679	—	32	19	—	2	1	2	7	—	63	5·4	—	8	—	3	4	—	—	—	2	17	1·5	177	15·3	128
Fulham	161,965	—	31	56	—	4	—	3	15	—	109	7·0	—	6	2	3	3	—	2	—	1	17	1·1	213	13·7	118
Chelsea	74,472	—	14	18	—	—	—	2	5	—	39	5·4	—	—	—	—	—	—	—	—	3	3	0·4	131	18·3	108
City of Westminster	173,905	—	51	23	—	4	—	1	14	—	93	5·6	—	1	1	2	2	—	—	—	1	7	0·4	253	15·2	125
North Districts.																										
St. Marylebone	128,580	—	20	10	—	5	—	1	12	—	48	3·9	—	1	2	—	3	—	—	—	1	7	0·6	173	14·0	75
Hampstead	89,633	—	21	8	—	—	—	—	4	—	33	3·8	—	—	—	1	—	—	—	—	—	1	0·1	99	11·5	85
St. Pancras	236,455	—	92	24	—	5	—	2	22	—	145	6·4	—	6	3	1	12	—	1	—	—	23	1·0	400	17·6	119
Islington	344,987	—	132	39	1	9	—	2	31	—	214	6·5	—	30	5	1	9	—	—	—	3	48	1·5	528	16·3	119
Stoke Newington	53,217	—	11	4	—	1	—	—	3	—	19	3·7	—	—	—	—	1	—	—	—	—	1	0·2	64	12·5	78
Hackney	230,721	—	118	38	—	9	—	2	29	—	196	8·9	—	—	3	—	6	—	1	—	2	12	0·5	316	14·3	98
Central Districts.																										
Holborn	55,805	—	11	2	—	—	—	—	7	—	20	3·7	—	—	—	1	1	—	—	—	—	2	0·4	95	17·8	82
Finsbury	97,463	—	41	10	—	3	—	—	9	—	63	6·7	—	4	1	2	4	—	1	—	2	14	1·5	178	19·0	79
City of London	21,267	—	8	1	—	—	—	—	1	—	10	4·9	—	—	2	—	1	—	—	—	—	3	1·5	35	17·1	179
East Districts.																										
Shoreditch	116,108	—	50	11	—	2	—	—	6	—	69	6·2	—	1	2	1	5	—	1	—	3	13	1·2	227	20·4	153
Bethnal Green	130,609	—	42	39	—	2	—	—	16	—	99	7·9	—	8	4	2	9	—	1	—	2	26	2·1	243	19·4	144
Stepney	307,176	—	92	56	—	6	—	—	27	—	181	6·1	—	27	4	10	24	—	1	—	5	71	2·4	547	18·5	106
Poplar	170,675	—	93	25	—	6	—	—	26	—	151	9·2	—	5	7	2	5	—	—	—	5	24	1·5	272	16·6	108
South Districts.																										
Southwark	209,143	—	83	36	—	8	—	1	40	—	173	8·6	—	19	2	5	2	—	1	—	2	31	1·5	363	18·1	108
Bermondsey	128,629	1	113	19	—	3	—	—	17	—	153	12·4	—	5	1	4	10	—	—	—	2	22	1·8	247	20·0	151
Lambeth	315,774	—	126	31	—	4	—	2	26	—	189	6·2	—	27	5	4	11	—	1	—	3	51	1·7	554	17·3	107
Battersea	179,622	—	78	28	—	2	—	—	17	—	125	7·3	—	10	1	2	5	—	—	—	6	24	1·4	249	14·5	120
Wandsworth	273,381	—	111	50	—	11	—	1	18	—	191	7·3	—	17	1	7	6	—	2	—	3	36	1·4	338	12·9	100
Camberwell	274,132	—	99	32	—	7	—	3	37	—	178	6·8	—	35	1	10	7	—	—	—	3	56	2·1	453	17·2	102
Deptford	115,495	—	55	18	—	3	—	—	16	—	92	8·3	—	11	3	1	10	—	—	—	1	26	2·3	188	17·0	108
Greenwich	105,350	—	30	62	—	7	—	1	5	—	105	10·4	—	6	2	4	8	—	—	—	1	21	2·1	131	13·0	123
Lewisham	148,483	—	47	21	—	1	—	2	7	—	78	5·5	—	5	1	1	1	—	—	—	1	9	0·6	169	11·9	118
Woolwich	127,345	—	12	44	—	4	—	1	9	—	110	9·0	—	2	—	3	2	—	1	—	2	10	0·8	182	14·9	115
Port of London	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

were registered; and 62, or more than two-fifths, of the deaths occurred in public institutions. The causes of seven, or nearly 5 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING JANUARY, 1906.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 6·7 per 1000 of the population, estimated at 4,721,217 persons in the middle of the year. In the three preceding months the rates had been 10·0, 9·4, and 6·7 per 1000 respectively. The lowest rates last month were recorded in Paddington, Kensington, St. Marylebone, Hampstead, Stoke Newington, and Holborn; and the highest rates in Hackney, Poplar, Southwark, Bermondsey, Greenwich, and Woolwich. The prevalence of scarlet fever last month showed a slight decline from that recorded in December; among the various metropolitan boroughs this disease was proportionally most prevalent in Hackney, Finsbury, Poplar, Southwark, Bermondsey, Battersea, and Deptford. The Metropolitan Asylums hospitals contained 2866 scarlet fever patients at the end of last month, against 4187, 3976, and 3410 at the end of the three preceding months; the weekly admissions averaged 296, against 509, 449, and 318 in the three preceding months. Diphtheria was much more prevalent than in the preceding month; the greatest proportional prevalence of this disease occurred in Fulham, Chelsea, Bethnal Green, Greenwich, and Woolwich. The number of diphtheria patients under treatment in the Metropolitan Asylums hospitals, which had been 796, 723, and 701 at the end of the three preceding months, had risen again to 867 at the end of last month; the weekly admissions averaged 121, against 123, 100, and 101 in the three preceding months. The prevalence of enteric fever showed no variation from that recorded in the preceding month; among the various metropolitan boroughs this disease was proportionally most prevalent in Kensington, St. Marylebone, Hackney, Southwark, Camberwell, and Greenwich. There were 95 enteric fever patients in the Metropolitan Asylums hospitals at the end of last month, against 157, 115, and 78 at the end of the three preceding months; the weekly admissions averaged 16, against 26, 17, and 13 in the three preceding months. Erysipelas was proportionally most prevalent in Hackney, Poplar, Southwark, Bermondsey, Deptford, and Greenwich. The 31 cases of puerperal fever notified during the month included four in Kensington, three in Fulham, three in Camberwell, and two each in Hammersmith, Chelsea, St. Pancras, Islington, Hackney, Lambeth, and Lewisham.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various boroughs, the deaths occurring in public institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the five weeks ending Feb. 3rd 7221 deaths of persons belonging to London were registered, equal to an annual rate of 16·0 per 1000; in the three preceding months the rates had been 14·0, 17·0, and 17·6 per 1000. The death-rates last month ranged from 11·5 in Hampstead, 11·9 in Lewisham, 12·5 in Stoke Newington, 12·7 in Paddington, and 12·9 in Wandsworth, to 18·3 in Chelsea, 18·5 in Stepney, 19·0 in Finsbury, 19·4 in Bethnal Green, 20·0 in Bermondsey, and 20·4 in Shoreditch. The 7221 deaths from all causes in London last month included 597 which were referred to the principal infectious diseases; of these, 240 resulted from measles, 54 from scarlet fever, 72 from diphtheria, 156 from whooping-cough, 15 from enteric fever, and 60 from diarrhœa. The lowest death-rates from these diseases were recorded in Chelsea, City of Westminster, Hampstead, Stoke Newington, Hackney, and Holborn; and the highest rates in Bethnal Green, Stepney, Bermondsey, Camberwell, Deptford, and Greenwich. The 240 deaths from measles were 46 above the average number in the corresponding periods of the four preceding years; this disease was proportionally most fatal in Islington, Finsbury, Stepney, Southwark, Lambeth, Camberwell, and Deptford. The 54 fatal cases of scarlet fever were slightly above the corrected average; among the various metropolitan boroughs this disease showed the greatest proportional mortality in Fulham, the City of London, Shoreditch, Bethnal Green, Poplar, Deptford, and Greenwich. The deaths from diphtheria numbered 72 last month, against an average of 90 in the corresponding periods of the four preceding years; this disease was proportionally most fatal in Hammersmith, Stepney, Bermondsey, Wandsworth, Camberwell, and Greenwich. The 156 fatal cases of whooping-cough showed a decline of 34 from the corrected average number; among the various metropolitan boroughs the highest death-rates from this disease were recorded in St. Pancras, Bethnal Green, Stepney, Bermondsey, Deptford, and Greenwich. The 15 deaths from enteric fever were 19 below the average number in the corresponding periods of the four preceding years; of these 15 deaths two belonged to Fulham and two to Wandsworth. The 60 fatal cases of diarrhœa were 19 below the corrected average; among the various metropolitan boroughs this disease was proportionally most fatal in Paddington, Chelsea, Shoreditch, Poplar, and Battersea. In conclusion, it may be stated that the aggregate mortality in London last month from the principal infectious diseases was nearly 13 per cent. below the average.

Infant mortality, measured by the proportion of deaths under one year of age to registered births, was equal to 112 per 1000. The lowest rates of infant mortality were recorded in Paddington, St. Marylebone, Hampstead, Stoke Newington, Holborn, and Finsbury; and the highest rates in Hammersmith, City of Westminster, Islington, City of London, Shoreditch, Bethnal Green, and Bermondsey.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: C. W. Sharples to the *Clyde*; J. Bradley to the *Essex*, on recommissioning. Staff Surgeons: W. S. H. Sequeira to the *Unicorn*, temporary. Surgeons: A. J. Wernet to Plymouth Hospital; W. J. Still to the *Cambridge*; L. C. E. Murphy to the *Duke of Edinburgh*, C. A. G. Phipps to the *Vivid*; S. H. Vickery to the *Thistle*; L. A. Baiss to the *Tamar*; G. Nunn to the *Barham*; H. Woods to the *Vivid*; and D. H. Vickery and W. L. Hawkins to the *Pembroke* for disposal.

The undermentioned Surgeons have been promoted to the rank of Staff Surgeon in His Majesty's Fleet:—Bernard Ley (dated Nov. 14th, 1902); Elystan Glodrydd Evelyn O'Leary (dated May 13th, 1904); Louis Edward Dartnell (dated Nov. 10th, 1904); Edward Dominic Joseph O'Malley; Richard Foster Clark (dated May 25th, 1905); and Reginald Waterfield (dated Nov. 29th, 1905).

ROYAL ARMY MEDICAL COLLEGE.

Lieutenant-Colonel Arthur M. Davies to be Professor of Hygiene, vice Lieutenant-Colonel R. H. Firth, whose tenure of that appointment has expired (dated Feb. 1st, 1906). Captain William S. Harrison to be Assistant Professor of Pathology, vice Captain D. Harvey, whose tenure of that appointment has expired (dated Feb. 1st, 1906).

ROYAL ARMY MEDICAL CORPS.

The undermentioned Majors are placed on retired pay (dated Jan. 30th, 1906):—John G. Black, Walter P. Squire, Stanley J. W. Hayman, and Julian P. S Hayes. Lieutenant Richard J. C. Thompson, from the Seconded List, to be Lieutenant (dated Jan. 31st, 1906).

VOLUNTEER CORPS.

Royal Engineers (Volunteers): 1st Durham: David Henderson Weir to be Surgeon-Lieutenant (dated Feb. 10th, 1906).

Rifle: 1st Volunteer Battalion the Royal Scots Fusiliers: Surgeon-Lieutenant-Colonel W. Sneddon is granted the honorary rank of Surgeon-Colonel (dated Feb. 10th, 1906); Surgeon-Lieutenant-Colonel and Honorary Surgeon-Colonel W. Sneddon resigns his commission, with permission to retain his rank and to wear the prescribed uniform (dated Feb. 10th, 1906). 2nd Volunteer Battalion the Durham Light Infantry: Surgeon-Captain G. Stephen resigns his commission (dated Feb. 10th, 1906).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

Welsh Bearer Company: Henry Thomas Samuel to be Lieutenant (dated Feb. 10th, 1906).

LEAVE ON MEDICAL CERTIFICATE.

The following alteration in the rules governing leave on medical certificate has been made:—To be substituted for the second sentence of paragraph 1915: "When an officer has been examined by a medical board (whether at home or abroad) the original proceedings must, in all cases, be forwarded to the War Office without delay; in the event of leave having been granted, the period and date of commencement of leave should be notified."

THE CHANNEL FLEET AND THE NEED FOR HOSPITAL ACCOMMODATION.

The Channel Fleet is now organised on a large scale and is manned probably by some 12,000 men. This being so it is no matter for surprise that medical opinion should consider the lack of hospital provision a serious error in administration. For the sick of all this large body of men there is no special accommodation; they are treated as best they can be in the individual vessels composing the fleet. The hospital ship *Maine* is understood to have been "earmarked" for the Mediterranean Fleet and analogous provision should now be made for the sick sailors in the Channel Fleet. There are many cases of illness which cannot possibly be treated adequately, and in accordance with modern medical and surgical knowledge, on board the vessels on which they occur. Extemporised provision for such cases must often be made in place of that finished treatment which our sailors have a right to expect and which the authorities, as is well known, wish to supply. The sick man on board his ship in the midst of routine duties, besides not being in a favourable situation for treatment, must often interfere with discipline. Drills may be dispensed with out of consideration for seriously ill, perhaps dying, men—an important matter as regards the efficiency of the *personnel* of a ship. Or a vessel may be compelled to put to sea with a dying man on board—indeed, such sad occurrences cannot be infrequent. We should much like to hear that the Channel Fleet has been treated like the Mediterranean Fleet and has been supplied with a hospital ship, and the sooner this happens the better, for the naval manœuvres must interfere with, if not prevent, the sending home of men who ought at once to be invalided.

THE MILITARY FAMILIES HOSPITAL, DEVONPORT.

The Military Families Hospital, Devonport, is restricted to the wives and children "on" or "off" the strength of soldiers and marines in the Plymouth garrison. During 1905 146 women and 39 children were admitted as in-patients, the out patients' attendances numbered 4421, and 1581 visits were made to patients' homes. The institution receives a Government grant and in addition subscriptions have been received from the "Marines," "Somersets," "Devons," &c. Numerous gifts in kind were also sent. The subscriptions are used to pay part of the hospital expenses of women and children not on the "married roll," to provide special surgical appliances and other extras for patients, and also to decorate and to brighten the wards.

A GERMAN SANATORIUM FOR OFFICERS' FAMILIES.

An authorisation to establish a sanatorium for the families of officers of the German army having been given to a private syndicate of Frankfort-on-the-Main by the Minister of Agriculture, Domains, and Forests, the Château of Idstein, situated among the Taunus mountains in Hesse-Nassau, was opened for patients in September last. In accordance with a circular issued by the Minister of War in August, 1905, this establishment, which is under the control of the general officer commanding the 18th Army Corps, is superintended by a military medical officer who has been relieved from duty for the purpose. The wives and children of necessitous officers on the effective list are eligible for admission provided they live under the same roof as the husbands or fathers and can produce a medical certificate attesting their fitness for treatment in the sanatorium. As a rule the course of treatment is limited to a month, but in special cases the period may be prolonged on the recommendation of the superintendent. When infants and children are admitted their mothers cannot be accommodated unless they, too, are eligible as patients. All medical treatment is free, but inmates are required to defray charges for lodging, food, and linen, as well as their travelling expenses.

HOSPITAL ATTENDANTS IN THE RUSSIAN ARMY.

In Russian military hospitals the subordinate duty is performed by a body of men who are designated *feldschers*. They receive a certain amount of medical training in schools organised for the purpose at St. Petersburg, Kiev, Moscow, Tiflis, Novotcherkask, and Irkutsk, and to a limited extent are allowed to replace medical officers when the services of the latter are not available. Such is the theory, but practically most of the soldiers composing Russia's vast army are dependent on *feldschers* for medical and surgical aid. Notwithstanding the disturbed state of the country a new school for *feldschers* has recently been opened at Kherson, the number of pupils to be instructed being fixed at 200. The authority for the establishment of this institution consists in a *prikaz*, or Order of Council, dated Jan. 4th (Old Style), 1905.

Correspondence.

"Audi alteram partem."

THE UNION OF LONDON MEDICAL SOCIETIES.

To the Editors of THE LANCET.

SIRS,—The organising committee of the above have sent 5000 reply postcards to members of the various societies requesting answers to certain questions. This course was adopted for the purpose of ascertaining the probable membership of the proposed new society. The replies have been most satisfactory, nearly 1000 individuals having stated their intention of joining the new society as Fellows at an annual subscription of £3 3*s*. So far, however, we have received less than 2000 answers.

In order to estimate the financial position of the proposed new society it is important that we should have as complete an idea as possible of the numbers of members of existing societies who are likely to join the new society as members or Fellows. We should, therefore, be much obliged if you would allow us to appeal through your columns for an early reply to the appended questions on the part of those who have not yet answered.

We are, Sirs, yours faithfully,

ARTHUR LATHAM,
HERBERT S. PENDLEBURY,
Brook-street, W., Feb. 10th, 1906. Honorary Secretaries.

[INCLOSURE.]

Union of Medical Societies.

Are you willing (1) to become a Fellow of the proposed new society with the full use of the general library and the right to attend all the sections at a subscription of £3 3*s*. per annum; or (2) to become a member of a section with the use of the sectional library and of the general reading room at a subscription of £1 1*s*. per annum; or (3) to become a member of a section as above and to join other sections at a subscription of 10*s*. 6*d*. per annum for each additional section; or (4) to become a member of one or more sections as above and in addition to pay a subscription of £1 1*s*. per annum for the full use of the general library?

HYGIENE OF COTTAGES IN AGRICULTURAL DISTRICTS.

To the Editors of THE LANCET.

SIRS,—May I, speaking from a long and practical experience as to the conditions existing in rural districts, bear witness to the correctness and importance of the letter by a "Suffolk Poor-law Medical Officer" in THE LANCET of Feb. 10th, p. 404. It would not be fitting to enter into details as to some of the horrible cases of illegitimacy which occur in consequence not so much of actual overcrowding as of the occupation of the same room by widowed father and daughter, grown-up sister and brother, &c. The overcrowding in earlier years prepares the way for this and effectually rubs off in the young child all that innate modesty and self-respect which under proper conditions should in after years be the safeguard of character. I do not think it would be far wrong to say that, as a rule, in the villages of England not more than one cottage out of every three has more than two bedrooms, and in these two bedrooms we almost invariably find the parents and one or two younger children in one room and the growing-up girls and boys in the other. Sometimes when the family is grown up the girls sleep in the parents' room and the boys in the other. The pitch darkness of the village streets in winter evenings is another evil and wise mothers will not allow their daughters to traverse

these even to attend classes if they are held at any distance from the home.

The remarks of your correspondent on local government cannot be too strongly emphasised and it is earnestly to be hoped that the present Government will give attention to this most important social question. The Local Government Board should have fuller powers for dealing with rural councils who neglect their duty and medical officers of health and inspectors of nuisances should not be subservient to individuals many of whom arm themselves with authority in order to block reform and guard slum interests. In one respect only my experience has differed from that of a Suffolk medical officer. I have been unfortunate enough to find quite as much insanitation, dilapidation, neglect, and overcrowding on properties belonging to large owners and to corporate and charitable bodies as on those belonging to small men.

I am, Sirs, yours faithfully,

C. COCHRANE,
Member of the Royal Sanitary Institute.

St. Neots, Feb. 10th, 1906.

To the Editors of THE LANCET.

SIRS,—There is no doubt that the question of providing better cottages for labourers is one of pressing importance in many rural districts. The relation, however, between a high rate of illegitimacy and districts in which the cottage accommodation leaves much to be desired is not quite so striking as it appears from the communication of a "Suffolk Poor-law Medical Officer" in THE LANCET of Feb. 10th, p. 404. The amount of illegitimacy can only be accurately estimated if it is given as a proportion of births to the number of unmarried and widowed women at child-bearing ages. Estimated in this way there were in 1901 (and I take this year as being the census year and therefore one in which we have information as to the number of women at the ages given) 6·4 illegitimate births per 1000 unmarried and widowed womem between the ages of 15 and 45 years in Somerset, 8·6 in Wiltshire, and 10·8 in Herefordshire, three agricultural counties. In Durham county the proportion per 1000 was 11·8, in Stafford 11·0, and in Nottingham 13·7—all industrial counties.

I am, Sirs, yours faithfully,

HERBERT JONES.

Hereford, Feb. 13th, 1906.

TREATMENT OF APPENDICITIS AND ALLIED BOWEL TROUBLES BY HIGH-UP INJECTION.

To the Editors of THE LANCET.

SIRS,—At a meeting of the Medical Association held in Toronto on June 6th, 1895, I read a paper showing that the ordinary indiarubber syringe presents several faults of construction. Its vaginal attachment is of such small size that it does not smooth out the mucous folds and therefore the wash-water or medicine does not reach the irritated or ulcerated surfaces; the ear-nozzle ought also to be of soft indiarubber as less likely to injure delicate structures. My principal object, however, on the present occasion is to point out that the hard short nozzle used for the administration of enemata per rectum is in several respects objectionable. Being short it does not reach far enough to deliver its charge where it would do most good, and, being hard, it impinges on the sphincter muscle and thus stimulates to expulsive action; the injection being delivered low down is speedily voided; and little opportunity therefore is given for solvent action on the contents of the bowel. I then proposed the using of an elastic indiarubber tube from 50 to 60 inches long and similar in calibre and character to the tube used in washing out the stomach. With such an apparatus, solvents, antiseptics, or purgatives could be introduced at a point to serve the purposes intended. At this time I gave it as my experience that the soft indiarubber tube is not only a valuable agent in the relief of obstinate constipation, impaction of fæces, invagination, and muco-enteritis, but it is also of pre-eminent utility in the treatment of appendicitis.

Since writing that paper more than ten years ago I have had abundant opportunity of further observation and although I have had some very serious cases under treatment I have yet to meet one in which surgical interference was necessary nor have I one death to record. The emptying of the bowel and the removal of irritating matter are not the only effects of high-up injection, for when the bowel is distended the appendix is retracted and distended, and in this way the fluid injected has a chance to enter and remove sources of irritation when immediately within the appendix, and in this way is more largely curative. I do not hold that this or any other medical or expectant treatment will in all cases supersede the knife; for instance, when the patient's temperature has increased with subsequent sudden lowering and the formation of pus is suspected I certainly would not rely on medical treatment alone. It is, however, well to remember (1) that Dr. O. Hanolan has stated from personal observation that in 42 necropsies in which a previous diagnosis of appendicitis had been made 32 of the deceased were found to have normal appendices; and (2) that Dr. Horrick has related that in the French army 188 cases were operated upon with 23 deaths, and 480 were treated medicinally with five deaths. Surgeons of experience maintain that it is best to operate early, but in my opinion there is little danger in delay if the patient is given easily digested non-fermentable food, rest in bed, antiphlogistine (a combination of clay, glycerine, boric acid, menthol, and eucalyptus) over the bowels or a cold compress. The measures which I take to mark the *ne plus ultra* in the treatment of appendicitis are as follows: the filling (or rather the complete dilating) of the bowel by means of the long tube with sweet oil, glycerine, and water, or soap and water; hypodermic injections of morphine or morphine and atropine; and complete abstinence from food or the taking of it sparingly in order to secure digestive rest. The following case supplies a good example of the extent to which by the long tube an injection may be forced. The patient, who was a man about 40 years of age, weighing about 275 pounds and of immense girth, had partaken heartily of pork and beans. He was normally a large eater, consuming 4 or 5 pounds of steak, with potatoes, toast, and so forth, at a sitting. When I saw him he was suffering from severe pain in the bowels, which were constipated and much distended with gas and food. The medical men who treated him in a village some distance from Lindsay had used the low-down injection repeatedly and had given him purgatives without effect. I at once used a tube fully six feet long and after one or two very scanty evacuations succeeded in passing the tube for its entire length and pumped in a gallon or two of warm water, the abdomen being kneaded at the same time. There was considerable vomiting, after which the injection entered more readily. When a large quantity of fluid had been used the patient began to cry out that he would certainly burst. The vomiting became more continuous and smelt of peppermint which had been added to the injection as an anti-flatulent. The vomiting with the continued pressure of the injection had evidently reversed the peristaltic action and there was no doubt that the water flavoured with peppermint had passed completely through the alimentary tract and was being ejected by the stomach through the mouth. The distension and soreness were relieved and the patient made a quick recovery. Another case which was almost a complete replica of the foregoing one was published by Dr. E. E. Tope in the *Medical World* of August, 1904. He does not give the length of the tube employed but writes: "A large rectal tube was passed the full length into the bowel. ..... We kept on pumping water into the patient and calling for more water while the patient kept vomiting it up until we had used more than five gallons and the water was no longer discoloured." I need not enter into a controversy as to the possibility of passing the ileo-cæcal valve, for in these cases there is no doubt that the long tube placed the injection beyond that point and so far up that peristalsis was reversed and the stomach accepted the inevitable. This is, perhaps, not after all so very strange, as in incarcerated bowel and even in appendicitis stercoraceous vomiting occurs and as soon as it is admitted that the ileo-cæcal valve may be passed the rest would appear easy.

I am, Sirs, yours faithfully,

P. PALMER BURROWS, M.D., C.M.,
President of the Association of Health Officers, Member of the American Public Health Association, and Member of the Dominion Medical Association.

Lindsay, Ontario, Canada, Jan. 20th, 1906.

THE COST OF ANTITOXIN.

To the Editors of THE LANCET.

SIRS,—The reading of the most excellent article on Some Points in the Treatment of Heart Failure in Diphtheria by Dr. Charles Bolton has led me to make an appeal to the makers of diphtheria antitoxin as to whether the time has not arrived when this valuable remedy for the treatment of so fatal a disease cannot be retailed to the profession at a

less cost. I think it will be admitted that even for an ordinary case 2000 units are practically useless, but still it is sent out in that strength at a price of 2*s.* 6*d.* It follows that if one has a case of diphtheria of any degree of severity it is necessary to inject from 20*s.* to 30*s.* worth of antitoxin in order to hope for success. This might be a matter of no moment to hospital authorities but to the general practitioner who has no hope in many instances of being paid it is of some importance. I trust others will take this matter up in order that the strength of antitoxin will be increased and the price reduced.—I am, Sirs, yours faithfully,

Portsmouth, Feb. 5th, 1906. R. EMMETT, M.D. Durh.

HEMPSTEAD CHURCH, ESSEX: THE BURIAL PLACE OF WILLIAM HARVEY.

To the Editors of THE LANCET.

SIRS,—The church tower of Hempstead, Essex, a small village of some 400 inhabitants, fell down in 1882, and the stones still lie in disfiguring heaps in the churchyard. The district is a purely agricultural one and it has hitherto been found impossible to raise locally an amount sufficient for its rebuilding. The parishioners deeply value their privilege of being the custodians of the mortal remains of Dr. William Harvey whose discovery of the circulation of the blood was mainly instrumental in raising the art of medicine and surgery to its present rank as a science. But their means being so small outside help is essential for rebuilding the tower of the church, which is estimated to cost £1500, and it has occurred to me as the newly appointed vicar of the parish that the members of the medical profession would feel it a privilege to contribute to restore to decency and order the structure in which rests the body of one to whom they owe so much.

I have communicated with the Royal College of Physicians of London and the Royal College of Surgeons of England and these bodies have recognised the justice of my appeal, the former by a contribution of 20 guineas and the latter by one of 10 guineas, provided a sufficient sum for the purpose is raised. May I ask you to use your influence in the matter and to open a subscription list in your journal, asking members of the medical profession at home and abroad to send contributions to Messrs. Barclay, Bankers, Saffron Walden, Hempstead Tower Fund, in honour and to the memory of such an illustrious member of their profession as Dr. William Harvey proved himself to be.

I am, Sirs, yours faithfully,

E. J. ROBERTS, Vicar.

Hempstead Vicarage, Saffron Walden, Feb. 12th, 1906.

The following sums have been already paid or promised:—

	£	*s.*	*d.*		£	*s.*	*d.*
In Messrs. Barclay's Bank	210	0	0	Royal College of Surgeons of England ...	10	10	0
Royal College of Physicians of London	21	0	0	Dr. D. H. Tuke	2	10	0

MEDICAL PRACTITIONERS AND THE NOTIFICATION OF INFECTIOUS DISEASES.

To the Editors of THE LANCET.

SIRS,—In your issue of Feb. 3rd you reported an action recently brought against Dr. Louis Stamm for alleged negligence in notifying a case of typhoid fever. In commenting upon the action you stated *inter alia* that the judge ordered the costs to be paid by the plaintiff on the highest scale "so that as far as possible Dr. Stamm will be indemnified for his necessary expenditure in resisting the claim against him." And, further, you stated "he," Dr. Stamm, "had to undergo all the anxiety and expense of preparing his defence."

May I be allowed somewhat to alter such statements by reporting that the case on behalf of Dr. Stamm was carried into court by the Medical Defence Union, and that no part of the expenses and costs incidental to such defence has had to be borne by the defendant, who most wisely had become, some years since, a subscriber to the Union. It is impossible, of course, for the Union to relieve any of its members whilst defending them from some of the anxiety due to such a position, but I think I may safely say that it is inaccurate to state that "all the anxiety" was undergone by the defendant, and certainly none of the expenses fell upon him. The fact that the defence was raised successfully in this action by the Union was reported in the accounts of the case published in the newspapers, but it apparently escaped your editorial notice.

I am, Sirs, yours faithfully,

A. G. BATEMAN,

4, Trafalgar-square, W.C., Feb. 13th, 1906. General Secretary.

*** We did not know that Dr. Stamm's defence was undertaken by the Medical Defence Union. We congratulate Dr. Stamm on his foresight and once again the Union on its good work.—ED. L.

THE LONDON COUNTY COUNCILLORS IN PARIS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

Paris, Feb. 10th.

WHEN the 82 members of the London County Council braved the stormy weather and embarked for Calais and Paris they undoubtedly thought that a great reception was awaiting them. This Sir Edwin Cornwall, speaking as chairman of the London County Council at the final banquet, frankly confessed; but, he added, "our expectations have been exceeded a thousand-fold." First of all, it is not usual for members of a municipality to be received with military honours. The Republican Guards, both the horse-guards and infantry, though now under the authority of the Minister of War, were originally a municipal guard and are still employed exclusively for maintaining order within the capital. Thus, when the members of the London County Council reached the Northern station at Paris they found a guard of honour protecting the approaches of the platform and a numerous escort of horse-guards to ride by the side of their carriages and to clear the road in front. Two military bands, one inside and the other outside the station, played the national anthems of the two countries as soon as the councillors arrived and they were, of course, met by their Parisian colleagues. The cavalry escort accompanied the councillors during the whole week and it was not merely the Paris municipality that rendered these honours; the Government also took an active part in the welcome. Not only were the councillors received by the Prime Minister and the Minister of Foreign Affairs, M. Rouvier, but, contrary to the usual custom, he delivered a speech to his visitors expressing his cordial sympathy with their mission. A few minutes previously the President of the Republic, M. Loubet, had made a similar departure from the usual custom, for he favoured his visitors with quite a lengthy address which of course was reproduced by the daily press. Then, finally, M. Dubief, Minister of the Interior, gave the London and Paris councillors a great reception and entertainment at his official residence.

That the representatives of municipal administrations should thus be honoured has, of course, an important political significance. Its meaning is obvious, but it is not the business of this journal to deal with purely political questions. In his speech of welcome Dr. Paul Brousse, President of the Paris Municipal Council, alluded to the many visits and exchanges of courtesies that had recently occurred between the two countries, including that of members of the medical profession on both sides of the Channel. Then he added: "At this very moment these two good neighbours are sitting side by side in the councils of Europe with this common object in view—the maintenance of peace."

Again, in another passage pronounced, be it observed, by a doctor of medicine, the President of the Paris Municipal Council said: "In the great town of Paris, of all our various municipal services I do not know one that can engender any sense of hatred in the minds of the citizens. On the contrary, all leads to concord; education, the measures of solidarity introduced in the schools, poor relief, public health, the creation of easy and agreeable means of transit—all these services are absolutely pacific in their purpose. Those who are successful workers in such pursuits must be admirably prepared to act as propagandists in favour of peace and liberty."

In the face of these remarks and after a week of really extraordinary demonstrations it would be mistaken modesty, leading to a misrepresentation of history, if the medical profession on both sides of the Channel failed to claim a share,

and a large share, in bringing about the present harmonious feeling. Indeed, at the Sorbonne M. Liard, the Vice-Rector of the University of Paris, in welcoming the London county councillors, did not fail to point this out. He reminded them that Paris was the oldest university in Europe. In default of universities in their own countries so many foreigners came to Paris that they constituted what were called "nations." To this day the Rue des Anglais remains. It is close to the Sorbonne, for it runs into the Rue des Écoles, and it was the thoroughfare in which the "English nation" resided. Even to-day there are still 1600 foreign students at the University of Paris. The advent of the political *entente cordiale* and of the municipal *entente cordiale* is most welcome; but it must be remembered that they were preceded, and to a large extent rendered possible, by the international *entente cordiale* of men of science from all the centres of learning. In the great hall of the Sorbonne the London councillors were shown the platform where in 1889, before scientific representatives from all parts of the world, Pasteur and Lister met and embraced. This memorable scene constituted as it were one of the foundation stones on which it became possible subsequently to build up the *entente cordiale*. The world of science, and especially the medical profession, has ever been "in favour of peace and liberty." What progress can it hope to attain without both these blessings. Therefore, while the press throughout the world has for a whole week recorded the efforts that have been made in favour of *l'entente municipale*, it is but natural and right that some record should likewise be made of the fact that *l'entente scientifique et médicale* preceded and materially assisted in rendering possible the later development of the peace movement. In such circumstances the two councils were in duty bound to pay a visit to the Sorbonne where so much preliminary work had been done in favour of *l'entente*.

Sir Edwin Cornwall thinks that the first steps which might be taken to realise in practice the fine sentiments expressed in all the speeches would be to effect an exchange of pupils between the London and Paris schools. But this is exactly what the universities, and notably the faculties of medicine, have done for centuries. Of course, now that travelling is so easy and comparatively cheap such exchanges of pupils from nation to nation become feasible, even among the poorer sections of the populations concerned. It has long been the practice of the middle and upper classes to send some of their children to schools abroad. Of course, if such advantages can be rendered accessible to other classes of the community the better for the cause of education and civilisation.

Leaving, however, these speculations aside and coming to specific municipal questions, it must be confessed that nothing much has been done. The intense anxiety to promote the *entente* tended to mar the bearing of the qualifying word *municipale*. There really was no time to study questions of municipal administration. It was not even possible to give any general, and still less a technical, explanation of the establishments visited unless it was by snatches of conversation held while being pushed forward hurriedly from place to place. It seems as if it was impossible on such occasions to avoid overcharging the programme; so many institutions claim the honour of a visit, and it is so difficult to refuse, particularly as the councillors are naturally anxious not to displease their electors.

To many it would seem preferable to see less but to examine and to understand better that which is seen. This is not, however, a view which would naturally present itself to the minds of the members of the Paris Municipal Council. It probably barely occurred to them that any London county councillor would seek during such a visit, or demonstration as it might more correctly be called, to study seriously some problems of municipal administration. Herein lies a fundamental difference between the two bodies that is of the utmost practical importance. The Paris municipal councillor makes municipal administration a business. So much is it a business that of late a form of insurance has been instituted so that municipal councillors are henceforth entitled to old-age pensions. Theoretically their functions are honorary, but in practice, and under the pretext of covering various expenses, they receive what amounts to a small salary with which it is possible to live in a modest manner. Apart from this they are frequently sent at the public expense to study in various towns of Europe different phases of administrative work. In England the county councillors remain at home, rarely make such investigations, and rely very much more on the reports and information supplied by the paid officials. Consequently the English councillors are likely to have less technical knowledge than the French. In these circumstances it would have been an advantage if during their visit to Paris the London county councillors had had time to acquire some technical information.

Nevertheless, even the present flying visit has conveyed mighty lessons. Without entering into technicalities, what a sight, what a lesson the aspect of the school children must have been. Here all looked equally clean, neat, and well dressed. The councillors had to be told, and told over and over again, though it is doubtful even now whether they have all realised the fact, that all the children were poor and not a few were extremely poor. Some came from dreadful slums and yet while at school all trace of the neglect they suffer at the hands of drunken, dissolute parents is carefully effaced. During school hours, in any case, they are properly fed and made to keep clean and tidy. It would have been impossible to pick out, if judging only by appearances, those children who came from squalid miserable homes. This was a very positive object-lesson in raising the physical and social standard of a people. Then, and again without entering into technicalities, the London county councillors must have been impressed by the vast and sanitary aspect of the great central markets, the *Halles Centrales*. But far more important, so far as London is concerned, were the cattle market and municipal slaughter-house of La Villette. Here all is order and symmetry. Each category of workers, commencing with the veterinary surgeons, is organised into a society and the committees of these bodies came forward one after the other to welcome the London county councillors. This and the general view obtained, brief as it was, sufficed to show how much easier it must be to control the meat-supply at La Villette than in the innumerable and scattered private slaughter-houses existing in London. Undoubtedly this excursion should strengthen the feeling in favour of establishing one or more public abattoirs for the metropolis. The London county councillors, who also have control of the asylums for the insane, saw at the clinic and asylum of Ste. Anne how better instruments, operating rooms, and various accessories were obtained by concentrating in one establishment all surgical cases arising among the insane. Then they saw a practical application of the cheap and sanitary Tollet system for the building of hospitals. This was at the General or Boucicaut Hospital, where some of the councillors were impressed by the fact that, in spite of the rigorous weather, the tuberculous patients were living almost in the open air. Altogether, even in the rapid course of this visit enough was seen to impress thoroughly upon the London county councillors the fact that, apart from the politics of *l'entente cordiale*, there is really much to be learnt in Paris which would be useful in improving the administration of London. Though England is well in advance in regard to sanitation and has been honoured by a considerable amount of imitation in France, nevertheless, and even in this department, there is much to be gained by a more intimate acquaintance with what has been done to preserve the health of the population of Paris. Thus from every point of view good is likely to result from the fraternal commingling of the members of the London County Council with their colleagues of the Paris Municipal Council.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester Royal Infirmary.

IN the report of the Manchester Royal Infirmary for the past year the subject of the new infirmary and the central receiving house claims attention. Substantial progress is being made with the new hospital but nothing definite has been done towards providing the central receiving house. The matter is, however, under the careful consideration, I believe, of the medical board as to the provision that will be required for out-patients and accidents, and the infirmary board is making inquiries as to available sites and will gladly receive offers of land or buildings suitable for the purpose. The financial question also has to be faced. It is expected that the cost of the erection of the new hospital and the central receiving house will about equal the sum to be paid

for the present site. The first instalment of £100,000 received from the corporation will be exhausted during the coming summer. Afterwards, until the present buildings are given up to the corporation, the cost of the new buildings will have to be defrayed by money borrowed at interest, which, of course, is costly. Moreover, it has to be borne in mind that when the new infirmary with its increased number of beds and the new receiving house with its separate administrative staff are occupied the annual expenditure will be much larger than at present. So far, income and expenditure have run fairly well together but unless the former, under the new conditions, is very considerably increased this smooth progression cannot be maintained. The question is whether the list of regular subscribers can be sufficiently enlarged. This is the day of high and increasing rates, of municipal expenditure on the grand scale, of municipal enterprises not always well considered and by many thought to be reckless and spendthrift. It is the day, moreover, when private living tends more and more towards self indulgence and extravagance. This state of things is not favourable to a sympathetic consideration of the calls of charity and duty, and the future of our hospitals and dispensaries is, to those interested, a subject of grave anxiety. It is said that already there is a deficiency in the income of our local medical charities of £10,000 a year. It seems pretty clear, therefore, that their services to humanity will soon have to be curtailed seriously, or that those who have means must become more awake to the duty of giving help to those less fortunate than themselves.

Baby Farming.

In her last report Miss F. Zanetti, the inspector for the Chorlton union, says that the present Infant Life Protection Act is not efficacious. There is no restraint "on those who adopt a child for a larger sum than £20, and none on those who nurse one child at a time." It has been discovered that during the last year baby-farming has been unusually rife. Advertisements have been put in newspapers—Scotch and North of England newspapers especially—offering to adopt a child for so much and at the same time, in Manchester papers for example, "asking for a home in which a baby could be taken with a small premium." In answer to these advertisements seven or eight babies have been received—together with various sums—who are handed to other persons, a profit being made on each transaction. "In one case they received £60, of which they paid £6 only to the woman who took the child; in another they kept £5 out of £10. They themselves had adopted a child with whom a premium of £250 had been paid." It seems that the original baby-farmers had committed no technical offence and so escaped punishment, as proceedings against offenders must be taken within six months of the date of the offence and all but one of those who received the children from these people escaped for the same reason. Miss Zanetti says that there is still some opposition to the "one child" case being notified and inspected, but as the result of her eight years' experience her conviction is that every child maintained for hire or reward apart from the parents should be protected by the visits of an inspector. In many cases the child is received into an overcrowded house, as "one more or less does not matter," and "fed on the domestic menu of older members of the family," and where the mother is satisfied, "and she usually says she is," the inspector has no power. There is evidently room for improvement as to the care of these most unhappy little waifs.

Last Year's Manchester Inquests.

The Manchester city coroner, Mr. E. A. Gibson, during last year held 806 inquests, though nearly 1200 deaths were reported to him. Among the verdicts were eight of wilful murder, six of manslaughter, and 49 of suicide while insane. In addition to these there were 33 where a verdict of *felo de se* was given. This latter number seems remarkable when compared with one's recollections of verdicts on suicides as given in the daily papers. What the ordinary proportion of suicides, taking the country through, which are classified as cases of *felo de se*, I do not know, but in this case it contrasts strongly with the return of the previous year, when only two such verdicts were returned. The coroner questions witnesses closely as to there having been any signs of insanity in the deceased persons. He considers that the verdict should be according to the evidence and not be determined by sentiment and advises the juries "that less stigma rests on a family if the finding is self-murder than if it is recorded that a man was insane when he committed suicide." The question as to sanity or otherwise in a case of suicide must often be a difficult one for a jury and it is pretty well understood that the verdict of insanity is the most easily arrived at and according to the popular idea the least distressing to the friends and therefore that to which the jury generally inclines. There were 365 deaths from accident and misadventure, and 74 from excessive drinking, while 114 children were found dead in bed. In 36 of these open verdicts were returned.

Cotton Districts Convalescent Fund.

It is a far cry to the cotton famine of Lancashire and Cheshire resulting from the American war between North and South, but the efforts for the relief of the sufferers of those days are still bearing fruit in the help given to convalescents to-day. At the meeting of the governors of the fund on Feb. 2nd it was stated that during the past year 2898 patients were sent to the convalescent hospitals at Southport and Buxton at a cost of a little over £5506, against 2751 patients at a cost of something more than £4862 in the previous year.

Small-pox in Oldham.

Ten cases of small-pox were reported in Oldham during the week-end. Three persons were summoned for "failing to take proper steps to prevent the spread of the disease." Two were fined 10*s.* and costs, and the third, who pleaded ignorance, which the magistrates did not believe, was let off with a caution in consideration of her poverty.

Feb. 13th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Congress of the Royal Sanitary Institute.

ALTHOUGH there have been successful sessional meetings of the Royal Sanitary Institute at Cardiff and at Bristol the first congress of the institute to be held in the West of England will be opened at Bristol on July 9th, under the presidency of Sir Edward Fry. A very representative and influential local committee has been formed with Mr. Colston Wintle, the chairman of the health committee of the city corporation, as chairman. A public meeting of this committee, with others interested, was held in the Guildhall on Feb. 2nd, when the local arrangements for the congress were discussed. The Victoria rooms will be used as reception rooms and lecture rooms at the University College, together with the large hall of the blind asylum, will be available for sectional meetings; these buildings are comparatively near together, very considerably nearer than were the meeting rooms used during the congress weeks either at Bradford or at Manchester. Among the municipal institutions which the members of the congress will be able to visit there should be specially mentioned the newly erected municipal lodging house and the public baths, the latest of which is exceptionally well designed. It is to be expected, too, that in a city of unventilated sewers the question of sewer ventilation will be freely discussed. Mr. T. J. Moss Flower has been appointed the local secretary of the congress and Mr. Wintle will preside over the conference of municipal representatives, Dr. D. S. Davies over that of medical officers of health, and Mr. H. Percy Boulnois, M.Inst.C.E., over that of engineers and surveyors to sanitary authorities.

Poor-law Administration in Bristol.

At a meeting of Poor-law officers held in Bristol on Feb. 2nd Mr. J. J. Simpson, who has been clerk during the past 31 years to the Bristol board of guardians, made some very interesting references to the history of Poor-law administration in the city. The first board of guardians to be established in England and Wales was that formed in Bristol in 1696 and it was 130 years before any other towns followed suit, the board in London being formed in 1834. In the early days of the Bristol board, said Mr. Simpson, it exercised certain magisterial duties and administered a place called "purgatory." Coming to more recent times it appears that the annual Poor-law expenditure in Bristol is £140,000. Of this sum £99,000 go to the poor, lunatics cost nearly £12,000, and only about £20,000 are spent upon administration.

"Devonshire Butter."

At the meeting of the Tiverton (Devon) district council

held on Jan. 30th it was decided to support the resolution of the Central Chamber of Agriculture in favour of enforcing the Acts to prevent adulteration. One of the members stated that tons of foreign butter were imported and sent to Devonshire to be adulterated or mixed with that made in the county and subsequently sent to Bristol and sold as "pure Devonshire butter" at 1*s.* 2½*d.* per pound. Another speaker said he knew the place referred to and endorsed what the previous member had said. The chairman said the council could not move in the matter except to advise the county analyst.

Stroud General Hospital.

At the annual meeting of the subscribers to the Stroud General Hospital held on Jan. 31st reference was made to the resignation of Mr. A. S. Cooke who had been honorary surgeon to the hospital for the past 40 years. The chairman (Rev. G. Ormerod) reminded the governors that Mr. Cooke was the first house surgeon of the institution and at that time also undertook the duties of honorary secretary. He was, the chairman added, largely responsible for the erection of the present building and to Mr. Cooke was also due in no small measure the establishment of a Hospital Sunday in Stroud. The governors passed a unanimous vote of thanks to Mr. Cooke for his services and appointed him consulting surgeon, which carries with it the position of a life governor.

Feb. 13th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Universities of Edinburgh and St. Andrews Election.

THE official declaration of the poll for the election of a Member of Parliament for these Universities was made on Feb. 9th by Principal Sir William Turner. The numbers were as follows:—

	St. Andrews.	Edinburgh.	Total.
Sir John Batty Tuke ...	681 ...	4212 ...	4893
Mr. J. St. Loe Strachey ...	343 ...	1967 ...	2310
Majority for Sir John Batty Tuke			2583

After the figures were announced Sir William Turner congratulated Sir John Batty Tuke on the result. The successful candidate then briefly addressed those present. He said that on the whole he was not sorry that there had been a contest, for it had enabled the constituency to give expression to an important principle and that was that University representation was not to depend upon the acceptance or refusal of any special dogma whether of political economy or of adherence to a particular party. The sinking of party politics was well illustrated in the case of Lyon Playfair who in 1868 was supported by a considerable section of Conservatives. He thought that the more politics were kept out of consideration the better for the Universities. He had received the support on the present occasion of men of all shades of political opinion and he thought that a fourth of his supporters were men who differed from him on matters of general politics. He regarded the victory as an important academic victory. He felt the responsibility of his position very deeply in this new Parliament, for he had doubts as to how it would look upon medical science. The President of the Local Government Board had openly admitted that he was an enemy of vaccination and Sir John Batty Tuke was not sure that greater difficulties might not be placed in the way of the physiologist and pathologist than existed at present. He greatly regretted the absence of Sir Michael Foster from the House of Commons. He mentioned that of the 4200 men who were pledged to him at the commencement of the poll every one, save one, had fulfilled his pledge. He then thanked Mr. Strachey for his courtesy and consideration and concluded by moving a vote of thanks to Sir William Turner. This was seconded, in the absence of Mr. Strachey and Professor Shield Nicholson, by Professor Lodge. Sir John Batty Tuke was cheered by a group of students on leaving the hall and in response to their call for a speech he addressed a few sentences to them.

Professor Clifford Allbutt in Edinburgh.

On Feb. 7th Professor T. Clifford Allbutt was the guest of the evening at the annual dinner of the Royal Medical Society. In replying to the toast of his health he referred to the history of the society, to the distinguished men whom Edinburgh had produced, and of the position which Edinburgh alumni occupied in other places. He also spoke of medical education and favoured the idea of a year of training with a practitioner after graduation. On the following day he gave a clinical address to the students attending Dr. G. A. Gibson's clinique when he spoke of heart and vessel conditions.

Proposed Changes in Examinations in the University of Edinburgh.

The University Court has been considering and has drafted changes which it is proposed to make in the curriculum for graduation in medicine and surgery. The aim of these regulations is to enable students to appear for examination in the earlier subjects of the curriculum at an earlier period than has hitherto been the case. The object aimed at is evidently to give more time for the final subjects and certainly all effort in that direction is deserving of support. It would still further help if the University Court had applied for powers to prevent, when it was thought desirable, students attending classes of an advanced division when they had failed in the subjects of an earlier division. Meanwhile the University has no such power, the result being that the work of classes sometimes gets hindered by a number of students attending who are not in a position to benefit by the class and who act as a drag upon the others. Nothing would do more to lighten teaching in the practical classes and in the Royal Infirmary than the possession of such power as is here indicated and the exercise of it by the examiners of the various divisions. All such authority comes through His Majesty in Council.

Compensation under the Public Health Act.

The First Division of the Court of Session in Edinburgh has given an important decision under the Public Health (Scotland) Act, 1897. The pursuer was a farmer in Renfrewshire and the action was raised against one of the district committees of the county for compensation for damage sustained by him through the committee exercising one of the powers conferred upon it by the Act. In September, 1904, there was an outbreak of typhoid fever in Greenock and the pursuer supplied milk to certain customers in the district in which the epidemic occurred. The local authority of the burgh of Greenock was of opinion that enteric fever was likely to be spread by the delivery of milk from the pursuer's farm and asked the defenders as local authority of the district to stop the milk-supply from the farm. The Renfrew local authority declined to grant the order and the Greenock local authority appealed to the sheriff-substitute of the county, who ordained the pursuer to cease supplying milk from his farm. From Sept. 20th to Nov. 11th, 1904, he sold no milk and he claimed compensation under the Act. The defenders repudiated liability and held that the claim for compensation should be directed against the local authority of Greenock. Lord Low, in the Outer House, had found the defenders liable and the First Division sustained the judgment, holding that although the order was pronounced by the sheriff-substitute, he represented the local authority which was responsible for dealing with the matter.

Scotch University Reform.

At a meeting of the Aberdeen Students' Representative Council in Marischal College on Feb. 3rd the following motions, carried among others at the Inter-University Conference, were discussed:—

1. That this Conference is of passed opinion that the present system of class examinations is hurtful to the best interests of Scottish university life, and that, therefore, prize lists should be fixed by the results of the degree examinations on a re-modelled basis.

This motion was rejected.

2. That, in view of the increasing importance of foreign study, work done, and attendance given, by Scottish students at foreign universities should be recognised, whenever procurable, as equivalent to similar work and attendance at our own universities.

This motion was carried.

3. That this Conference recommends to the Senatus of the four Scottish universities the necessity of affording increased facilities for the study of practical work in the Faculty of Medicine.

This motion was carried.

4. That a candidate for the degrees of M.B. and Ch.B. who has passed the first professional examination in any of our Scottish universities, be admitted to the second and subsequent professional examinations in any other Scottish university on payment of the first professional examination fee.

This motion was carried.

5. That a thorough reform of the medical curriculum is urgently called for, and that in support of this contention the secretaries

of the councils shall submit to them such of the following grievances as are applicable to their own universities: (1) The undesirable reduplication of lectures, two or more courses being taken out in many cases. (2) The large number of lectures attended in the fifth or final year—a year which was formerly intended for clinical work. Cause, overcrowded state of the curriculum. (3) the inadequate time allowed for the large number of clinical classes upon which compulsory attendance is required. (4) The absence of the teaching of pathology before the student commences the study of medicine and surgery systematically. (5) The great dearth of clinical teaching of gynæcology. (6) The need for the separation of pharmacy from pharmacology in the curriculum, while pharmacology naturally falls to be taught concurrently with medicine. (7) The necessity for a double final examination in medicine. (8) The teaching of clinical medicine on the same lines as that of clinical surgery viz., by the institution of junior and senior clinic. (9) The unsatisfactory arrangement of the class hours—e.g., the overlapping of several of the compulsory special classes. (10) the need for a post-graduate course of study. (11) The unscientific position occupied by the study of surgery in the second year before the student has obtained the required knowledge of anatomy and physiology and pathology. This might be rectified by the teaching of surgery on general lines before the student proceeds to a special study of that subject. (12) The existence of over-much lecturing, leaving the student no time for private study and also little opportunity for gaining a practical knowledge of his profession. (13) The preliminary examination for medicine should include an examination on general lines in the subjects at present comprising the first professional examination. This would relieve the necessity for the otherwise inevitable institution of a six years' course of study.

This motion was referred to the medical committee for discussion.

6. That steps be now taken with reference to the proposed Scottish University Magazine and that a committee, with Mr. J. I. Macpherson, M.A., LL.B., as convener, and consisting of one member from each council, be appointed to investigate in the matter.

This motion was rejected.

Newhills Cottage Home and Sanatorium.

The report for 1905 states that last year was the thirty-first year of the convalescent home and the third year of the sanatorium for consumptives which is attached to it. The admissions for the year number 213, which are distributed thus: Convalescent home: 39 men, 70 women, and 28 children; total, 137. Sanatorium: 36 men, 27 women, and 13 children; total, 76. The convalescent home is intended for the benefit of respectable persons in humble life who appear to be falling into ill health or are convalescing after non-infectious ailments. The cases in 1905 were of the usual description, as anæmia, dyspepsia, bronchitis, and rheumatism. Two patients left without improvement, 30 became to all appearance quite well, and the remainder left materially improved. The sanatorium, which is open throughout the whole year, was utilised in 1905 to the utmost extent that the funds would permit. Of the 76 patients admitted two died and 11 who were in an advanced stage of the disease made no improvement. All the others were much improved and a few of the adults were cured. The children, with the exception of five who were of a weakly type, left in perfect health. In the admission of the patients to the sanatorium preference is given to cases at an early stage of the disease, but it is to be regretted that there are comparatively few applications of this kind except on behalf of children.

Feb. 13th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Presentation of Addresses to the New Viceroy.

ON Feb. 9th an address was presented by the Royal College of Surgeons in Ireland to his Excellency the Lord Lieutenant, the deputation including Sir Arthur Chance (the President of the College), Mr. Henry R. Swanzy (Vice-president), and several members of the council. After the usual ceremonious introduction, the address, which was read by Sir Charles A. Cameron, continued as follows:—

We beg leave on behalf of our College to give expression to those feelings of loyalty and devotion to His Majesty's Throne and person which have animated its Fellows and Licentiates since its incorporation by Royal Charter in the year 1784. The functions of our College as defined by that Charter were the regulation of the profession of surgery, and the establishment of a liberal and extensive system of surgical education in Ireland. The services rendered to the State by our College are apparent if it be remembered that large numbers of our Fellows and Licentiates are engaged in surgical practice in every part of the Empire, while many hold commissions in His Majesty's naval and military services. We offer our respectful welcome also to the Countess of Aberdeen, and desire to express the hope that your term of office may be marked by happiness to your Excellencies and to those you rule over.

His Excellency, in reply, said:—

Sir Arthur Chance and Gentlemen,—This address from the distinguished and influential body which you represent furnishes an expression of loyalty to the King and of welcome to His Majesty's representative, which I cordially appreciate. I need hardly assure you that I recognise the far-reaching and beneficent services of the great profession and calling to which you belong, and in particular the high attainments in the science and practice of surgery which have been reached in this country. It is assuredly a cause for congratulation that your College, the centre and headquarters of the surgical profession in Ireland, can point to the fact that so many of its members have made their mark (I am speaking, of course, figuratively) in various parts of the world.

In presenting an address to the Lord Lieutenant on Feb. 12th the authorities of Trinity College, Dublin, pointed out that its honours and emoluments were open to all whom the test of examination proved to be most worthy, irrespectively of creed or religion; and also that it was 113 years since the University of Dublin opened its degrees and its teaching to students of all religious denominations. The University has also opened its degrees and prizes to women. In his reply, Lord Aberdeen, among other things, said that such an institution as theirs would have a claim for the continuance and increase of public support and approval on the ground of well-considered measures adapted to meet the large and ever-increasing requirements in regard to education generally.

Direct Representation for Ireland on the General Medical Council.

The counting of votes in this election took place on Feb. 10th when it appeared that there was a difference of only four votes in an electorate of over 3000. Sir William Thomson has demanded a re-count and scrutiny of the votes, many of the papers (about 60) having been returned by the Dead Letter Office.

Hospital Nursing in Dublin.

A nurse at the Adelaide Hospital recently committed suicide after 12 hours of night duty by swallowing two ounces from oxalic acid. The coroner's jury found that she died from poisoning and observed that the hours of night duty seemed excessive, after which much correspondence and a leading article appeared in the *Irish Times* dealing with the matter. It is well known in Dublin hospitals that a young nurse or probationer is frequently unable to stand the strain, so that many of them suffer from such troubles as swollen ankles, which require a fortnight's rest in bed to cure. It seems hard that they should suffer even from this. They come from all classes and have much more important work than an ordinary shop-girl who, on the other hand, has some prospect of advancement or superannuation, while they have none. The *Irish Times* in a leading article on Feb. 8th notes with satisfaction that the management of the Meath Hospital has determined to deal with the latter trouble and to establish a pension fund for its nurses. A ball will take place on the occasion of the second Castle levée on the evening of March 6th, the proceeds of which will be devoted to the establishment of a pension fund for nurses. The Meath Hospital proposes to make an arrangement with the Royal National Pension Fund for Nurses for the issue of policies and the payment of pensions to nurses of that hospital. The scheme is drawn up with much care and if it is carried into execution it will provide a method of dealing with the nursing question which all other hospitals in Dublin must soon follow.

Royal Victoria Hospital, Belfast.

At the bi-monthly meeting of the board of management held on Feb. 7th it was announced that the trustees of the late Mr. Henry Matier had signified their intention of making over to the hospital the sum of £5000, for which they were most cordially thanked, and special attention was drawn to the fact that it was largely through the personal influence of Dr. H. L. McKisack, a member of the hospital staff and a son-in-law of Mr. Matier, that this magnificent donation had come to the Royal Victoria Hospital. The annual meeting of the supporters will be held on March 28th and it is gratifying to be able to state that on the year's working there is a balance of £142; all the more satisfactory when taken with this circumstance is the fact that an additional unit with 32 beds has been in full working order. On the capital account a sum of £3142 has been invested.

Belfast District Lunatic Asylum.

At the monthly meeting of the committee held on Feb. 12th special attention was drawn to the congested state of the Grosvenor-road institution and it was decided to hold a meeting on Feb. 21st to consider the whole question.

Queen's College, Belfast.

A report has been issued to the subscribers showing that

the Better Equipment Fund has been raised to £70,000. The council has decided to expend £300 in procuring new up-to-date microscopes for various scientific departments of the College.—The following members of the College medical staff have been appointed examiners in the Royal University: Professor J. A. Lindsay, in medicine; Professor W. St. Clair Symmers, in pathology; Professor J. W. Byers, in midwifery; Professor T. Sinclair, in surgery; Professor Sir William Whitla, in materia medica; Professor J. Symington, in anatomy; and Professor T. H. Milroy, in physiology.

Feb. 13th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Treatment of Congenital Dislocation of the Hip.

AT the meeting of the Society of Internes of the Paris hospitals, which was held on Jan. 25th, M. Judet read a paper dealing with the results in 17 cases of congenital dislocation of the hip which had been under his care. Of these cases he considered that eight might be called anatomical cures—that is to say, the head of the femur had been perfectly reduced into the cotyloid cavity. One of these cases was that of a little girl who was shown at the meeting. She had had congenital dislocation on the right side but it had been completely reduced. Her walking was perfect and it was difficult to diagnose by merely clinical methods which had been the affected side. With the illustrations afforded by numerous radiograms M. Judet was able to demonstrate that when reduction was obtained the contact of the head of the femur with the Y-shaped cartilage brought about a process of ossification resulting in the formation of a cotyloid cavity and of a normal articulation. In cases where complete reduction could not be obtained M. Judet was able to give great relief by fixing the head of the femur in the neighbourhood of the anterior inferior iliac spine. Where the dislocation can be reduced he is in favour of immobilising the hip-joint in such a position that the head of the femur and the cotyloid cavity are in apposition and accurately centred. The fixing apparatus is left in position for four or five months, at the end of which time a cure will generally be found to have taken place. M. Judet concluded by showing a "pelvi-fixateur," by means of which the immobilisation and the application of the plaster spica bandage could easily be carried out.

The Mortality from Tuberculosis in France and in Germany.

At a meeting of the Academy of Medicine held on Jan. 23rd M. R. Robin pointed out that France does not possess the elements necessary for drawing up accurate statistics of the mortality from tuberculosis. Statistics of the cause of death are obtainable for 730 towns only. Therefore, approximate figures only can be given. Taking as a basis the years 1901, 1902, and 1903, when there was an average of 150,000 deaths from tuberculosis, he pointed out that the mortality corresponded in reality to one of 21·3 per 10,000 inhabitants, a much lower figure than had been given and one which was quite comparable with the figure given for Germany. The principal cause of the diminution of mortality from tuberculosis which has occurred during the last 25 years in both countries is due to the prophylactic measures concerned with public hygiene which have been in force during that period. French organisation for sanatorium treatment was not so perfect as German, but if the mortality in the two countries were comparable the decrease was probably not due to sanatorium treatment but to the hygienic measures to which he had referred. M. Robin, therefore, begged to move the following as a resolution:—

That the Academy considers that the Minister of the Interior should take the necessary measures that statistics of the cause of death, which at present are only obtainable for 730 towns, should henceforward be obtainable in every commune in France and that the figures should also give the total population, together with the respective areas of the communes and the density of population therein.

M. Brouardel said that he in no way wished to oppose the motion of M. Robin but the most important thing was that the causes of every case of death should be compulsorily registered. Whatever the figures obtainable at present as to the mortality from tuberculosis might be it was evident that the mortality from this disease was very high and every means should be taken to combat this formidable malady. At the following meeting held on Jan. 30th M. Kelsch said that even for the army the statistics were by no means trustworthy. If they could not obtain exact figures for the army it would be all the more difficult to obtain them for the general population. M. Landouzy said that the mortality from tuberculosis in France and in other countries was probably really higher than that given by statistics and this was due to the very indifferent way in which death certificates were given. In Paris, for instance, for the year 1904, 27·9 per cent. of deaths were certified as "cause unknown." From a personal inquiry which he had carried out he considered that tuberculosis was increasing throughout more than half the area of France, while throughout one-third it was stationary. It increased in village communities where it was imported by factory workers and time-expired soldiers, and its development was encouraged by alcoholism, industrial progress, and the total absence of prophylactic measures. In order to bring out this development clearly it was necessary to remodel the system of nomenclature and to give directions that causes of death should be stated with more precision than at present. M. Chauffard insisted on the social aspects of the question raised before the Academy. Improved statistical methods would lead to a better appreciation of the conditions under which tuberculosis was developed. He said that great carelessness was shown in disinfecting houses in which deaths from tuberculosis had occurred. He related the case of some rooms in which within 12 years there had been 14 deaths from tuberculosis but the rooms had never been disinfected. In his opinion disinfection should be compulsory after every death from tuberculosis.

The Intradural Administration of Stovaine.

At the meeting of the Surgical Society held on Jan. 31st M. Chaput read a paper upon the above subject. He said that during 1905 he had performed 309 operations under anæsthesia brought about by the injection of stovaine into the subdural space. He considered that it was an excellent method in so far as regards operations upon the lower limbs, the ano-genital regions, for hernia or for artificial anus. Any laparotomy might also be performed with the patient anæsthetised in this way. The anæsthesia, however, was not completely marked in alcoholics, in patients who were very timid or nervous, in young women, and in patients who were much pulled down by pain. The method was dangerous in markedly cachectic patients. The only objection which he had found to its use was that it sometimes caused severe headache, but this could be avoided by drawing off a few cubic centimetres of the cerebro-spinal fluid before the injection.

Treatment of Unilateral Facial Spasm.

At a meeting of the Neurological Society held on Feb. 7th M. Abadie and M. Dupuy-Dutemps showed a woman who for 16 years had suffered from a left unilateral facial spasm. They had treated her by the method of Schloesser—viz., by injecting one cubic centimetre of alcohol of 80 degrees into the substance of the facial nerve at the level of the stylomastoid foramen. The patient had transitory facial paralysis and the spasm has now completely disappeared.

Feb. 13th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Question of a Ministry of Public Health.

DURING the last few weeks the Government has been paying more attention to medical affairs than it has done for many years. It is possible that the organisation of the medical profession, though in an incipient stage and not very strong, is beginning to make itself felt. Whether that be so or not the fact remains that some recent action of the Ministry of the Interior makes it probable that a Ministry of Public Health may be created. In the Upper House of Parliament Professor Toidt, who occupies the chair of anatomy in the University of Vienna and was called to the House by the Government, has presented a report on a petition from the Union of Medical Boards of Austria (Aerzte-Vereins-Verband). He recommended that the petition should be submitted for the consideration of the Government, because in spite of all the improvements

that have been made in matters of sanitation within the last ten years, there remained many problems and difficulties which could only be solved by centralisation of the department and subordination of it to the control of some medico-administrative authority. If the drafting of the sanitary regulations was left to persons unacquainted with the principles of hygiene and public medicine mistakes were likely to be made, mistakes which might have a prejudicial effect on the practical working of the regulations in question. Although the representative of the Government raised objections to Professor Toldt's proposal of constituting a Ministry of Public Health the original motion, in accordance with the petition from the medical associations, was carried.

Registration Formalities at Surgical Operations.

A misadventure which happened recently at one of the few private surgical homes in Vienna and which resulted in the death of the patient has led to the issue of an Ordinance by the Minister of Education, requiring that in future a record shall be kept of each operation and of each surgeon, nurse, and other person engaged in it, so that the respective functions of those taking part in the operation can be traced at any future time. It appears that a laparotomy for disease of the ovary had been performed upon a woman in a private hospital, but after being discharged she again fell ill and died in another hospital from peritonitis. The necropsy revealed a gauze compress which had been inadvertently left in the abdomen as the exciting cause of the fatal inflammation. The case became the subject of a judicial inquiry but there was no means of discovering who was to blame as the surgeons who were engaged in the operation could not be traced.

Professor Nothnagel's Successor.

After long and tedious negotiations a successor to the late Professor Nothnagel has been found in Professor von Noorden of Frankfort-on-the-Main, who had been recommended by the Senate of the University of Vienna *primo loco*. The main points of the contract between the Government and the professor are as follows: the present clinic to be taken over on Oct. 1st; the building of the new clinic to be commenced not later than Jan. 1st, 1907; a grant to be made for a fourth clinical assistant to be nominated by Professor von Noorden; and a separate post to be created for a special assistant in medical chemistry at the new clinic with a prospect of early promotion to an extraordinary professorship. Professor von Noorden, who is a recognised authority on disorders of metabolism, was a collaborator on Professor Nothnagel's great "Handbook of Pathology" and enjoys a world-wide reputation. A man of exceptional ability, he will no doubt form a new school of clinical medicine in Vienna as he will be connected with a large hospital and will have at his disposal one of the best equipped clinics in the world.

Cystitis following Perforation of the Ileum by a Foreign Body.

A unique case of a foreign body in external contact with the bladder was recently encountered by Dr. Exner at an operation which he performed in Professor Hochenegg's clinic. The patient, who was a woman, had complained of pains in the abdomen and shortly afterwards a purulent cystitis troubled her severely. Cystoscopic examination showed at first nothing except hyperæmia of the mucous membrane, but ten days later when the purulent discharge had subsided, cystoscopy revealed the presence of a polypoid tumour at the apex of the bladder; whereupon suprapubic enucleation of the neoplasm was decided on. When the abdomen was opened it was discovered that the tumour was fixed to the peritoneum; the latter was therefore incised, whereupon parts of the free omentum were found adherent to the apex of the bladder and a loop of the small intestine was also fixed there by means of an attachment to the omentum. The adhesions were separated and the tumour was resected with a part of the bladder wall. The after-history of the case was quite uneventful. A catheter was passed and left in position for 12 days. The patient made a complete recovery and was discharged after six weeks. The interesting point of the case was that, although the peritoneal covering and the muscular stratum of the bladder were destroyed, the mucous membrane was not perforated by the neoplasm, the centre of which consisted of a piece of wood about one inch long, of the shape of a thick pin. As already mentioned, the omentum was adherent at the site of the lesion and one portion of the wood lay in the substance of the omentum, while the remainder lay in the substance of the bladder. The wood had no doubt passed along the intestinal canal, had perforated it, and had began to perforate the wall of the bladder.

Examination of the Stomach by means of the X Rays.

The digestive power of the stomach, an exact estimate of which is essential in the treatment of disorders of metabolism and diseases of the intestines, has hitherto been measured only by means of Ewald's test breakfast, with the subsequent use of the stomach pump, or by the iodine or salol reaction of the urine, as suggested by Sahli. Dr. Schwarz has recently proposed a very simple method of examining the digestive power of the gastric juice, at least as far as the digestion of connective tissue is concerned. He uses subnitrate of bismuth, a substance which is well known to cast a deep black shadow when the x rays are directed upon it. He makes the patient swallow a large pill of about one-third or half an ounce of the powdered subnitrate inclosed in an envelope of connective tissue obtained from the appendix vermiformis of an animal such as the sheep, goat, or ox. If the abdomen of the patient is exposed to the x rays a short time after swallowing the pill a deep black spot of about the size of a farthing is seen at the bottom of the stomach, on its lowest point mostly. As soon as the coating of connective tissue is digested, the powder is scattered and the contents of the stomach are well mixed with the powder, after which a fainter but extensive shadow, which gives the contour of the entire organ, is cast on the photographic plate or on the fluorescent screen. This is the case in seven hours after ingestion of the pill in healthy stomachs. If the digestion is affected, as is the case in gastroptosis, deficiency of acid, pyloric disease, and cancer, the black spot remains visible for a longer time—such as 9, 11, or even 20 hours. If the contents of the stomach are digested too quickly, as in hyperacidity, the black spot disappears in from two to five hours. The method is very simple and causes no serious inconvenience to the patient.

Feb. 10th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Public Health of the Dominion of Canada.

THE Director-General of Public Health in Canada, Dr. F. Montizambert, has his annual report ready to present to Parliament when that body meets in the course of the next two months. In it he says that in no State of the American Union along the Canadian border are there any existing cases of small-pox; consequently it has been considered advisable to withdraw all inspectors and port officials in different places where they had been stationed. On account, also, of the fact that no case of plague has occurred in San Francisco since March, 1905, inspection of all vessels arriving at British Columbia ports from that city was discontinued on Jan. 1st. Dr. Montizambert once more emphasises the importance of all health matters in the Dominion being gathered together under one departmental head, under one of the existing Ministers of the Crown, instead of being scattered throughout several departments of the Governmental service. In his report also he refers to the leper lazaretto at Tracadie, New Brunswick, on the books of which institution there are now 17 patients, although two are not inmates but are out on parole; there are ten males and seven females. There were no deaths during the past year and only two new patients were admitted. The treatment followed in this institution consists of the administration of chaulmoogra oil and strychnine with external applications of creolin and good results ensue. One patient, a man, aged 40 years, is apparently cured of all symptoms and has been discharged and has returned to his home but will report to the physician of the institution from time to time. Dr. Montizambert has been elected chairman of the public health section of the meeting of the British Medical Association to be held in Toronto from August 21st to 25th next.

The Health of Ontario in December.

Small-pox is somewhat prevalent in the province of Ontario, although the disease is present in a rather mild form. During December, 1905, 1289 cases of the disease were reported to the Provincial Health Department, all from

20 municipalities. No deaths were reported. The ravages of pulmonary tuberculosis still continue large in Ontario. During December there were 172 deaths from that disease. Typhoid fever was also more than ordinarily present, there being 152 cases, 84 more than in December, 1904. The number of deaths from it was 45. The number of cases of scarlet fever was 151, with five deaths; diphtheria, 231 cases, with 28 deaths; and whooping-cough, 35 cases, with six deaths.

"Christian Scientists" discharged by Court.

Some time ago a young man died in Toronto from typhoid fever under "Christian Science" attention; the medical man who had first been in attendance was dismissed from the case and "Christian Science" was substituted. The medical man reported the case to the authorities of the law and the result was that shortly after the young man died several persons found themselves in a court of law in connexion with the matter. A conviction was secured but an appeal was taken to the Court of Appeal at Osgoode Hall, Toronto. This court, after due consideration of the charge and conviction, ruled that the charge had been wrongly worded against the prisoners, as it did not come under the head of any indictable offence, the charge being one of conspiracy, which was entered under a general term.

Analysis of Patent Medicines in Canada.

A child recently died in British Columbia from an overdose of a patent medicine, and the result has been to call the attention of the Dominion Government to the fact that there is no law at present on the Canadian statute books authorising the Department of Inland Revenue to take any proceedings against the manufacturers of patent medicines who use harmful ingredients in making up their medicines. Pressure is being brought to bear upon the Federal Government and the matter is now receiving the attention of the officials of the Inland Revenue Department, under whose direction analyses of a chemical character are from time to time carried out. In the meantime, as a preliminary, the department will instruct its analyst to make analyses of several of the best-known patent medicines in Canada and the future action of the department and of the Government will largely depend upon the results of these analyses.

Western Hospital, Montreal.

The annual meeting of the corporation of the Western Hospital, Montreal, was held in that city on Jan. 16th. The thirty third annual report submitted by Dr. G. H. Mathewson showed that the number of patients treated during the year was 524 and the number of consultations in the outdoor department was 6698. As the hospital building is altogether too small to provide accommodation for those seeking admittance into its wards the board of governors has decided to add a new wing to provide for 100 additional beds, which will be ready for the reception of patients before the expiration of the present year. The total receipts of the hospital were $21,405.58, while the expenditure was $15,541.50. Some changes have taken place on the medical staff. Dr. Grace Ritchie England (for 13 years assistant gynæcologist), Dr. J. Leslie Foley (dermatologist), and Dr. Andrew Macphail (pathologist) tendered their resignations, which were accepted. Dr. C. C. Gurd and Dr. L. Gilday succeed Dr. England and Dr. Foley and Dr. A. G. Nichols succeeds Dr. Macphail. The new wing, with complete equipment, will cost $65,000.

Royal Victoria Hospital, Montreal.

According to the annual report of the superintendent of the Royal Victoria Hospital, Montreal, there were 3093 patients treated in the wards of that institution in 1905, an increase of 39 over the previous year. The free patients numbered 1631. The total days of hospital treatment aggregated 71,194, as against 74,777 in the preceding year. On Jan. 1st, 1905, there were 174 patients in the hospital and during the year 3085 were discharged, of whom 1348 were well, 1093 improved, 184 not improved, 278 not treated, and 182 died. There remained in the hospital on Dec. 31st, 1905, 189 patients. Of the 182 deaths 57 took place within 48 hours of admission, which thus would bring the death-rate from 5·89 to 4·05 per cent. In the 12 years during which this hospital has been in existence it has treated 29,682 patients in its wards. In the out-patient departments the total number of patients treated last year was 3830. The number of consultations to these patients was 24,872: medical, 8587; surgical, 4988; eye and ear, 4524; nose and throat, 5633; and diseases of women, 1140. The income for the year was $160,591. The total cost per patient per day was $1·74. Dr. J. W. Stirling was appointed ophthalmologist to the hospital in succession to the late Dr. Frank Buller.

Montreal General Hospital.

According to the annual report of the Montreal General Hospital there were treated at that institution in 1905 47,580 patients. The report shows that 3210 were treated in the wards, while 44,377 were treated in the outdoor departments, an increase of nearly 5000 over the previous year. The report also shows that during the month of December, 1905, there were 257 patients admitted to the wards and that 244 were discharged. The average daily number of sick in residence was 204. There were 27 deaths in December and the outdoor consultations in that month numbered 3769.

Feb. 3rd.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The Rockefeller Institute for Medical Research.

THE Rockefeller Institute for Medical Research purposes to award for the year 1906-07 a limited number of scholarships and fellowships for work to be carried on in the laboratories of the institute in New York city under the following conditions. The scholarships and fellowships will be granted to assist investigations in experimental pathology, bacteriology, medical zoology, physiology and pharmacology, and physiological and pathological chemistry. They are open to men and women who are properly qualified to undertake research work in any of the above-mentioned subjects and are granted for one year. The value of these scholarships and fellowships ranges from $600 to $1000. It is expected that holders of the scholarships and fellowships will devote their entire time to research. Applications, accompanied by proper credentials, should be in the hands of Dr. L. Emmet Holt, 14, West 55th-street, New York city, secretary of the Rockefeller Institute, not later than April 1st, 1906. The announcement of the appointments will be made about May 15th. The term of service will begin preferably on Oct. 1st, but, by special arrangement, may be begun at another time.

Medical Education and Sanitary Research Work.

Considering the immense diversity of subjects included under the headings of hygiene and sanitation it is only to be expected that the necessity of specialising in them would be recognised. Dr. William T. Sedgwick of Boston, writing in *American Medicine* of Feb. 3rd, accordingly urges that a sharp separation should be made between sanitary and hygienic work in research and education. He would have sanitation mean chiefly the care of the environment, such as street cleaning and watering, refuse disposal, heating and ventilation, water-supplies, milk-supplies, sewerage, &c., and would restrict the term hygiene to such conditions affecting individuals as make up the problems of personal hygiene—namely, muscular exercise, sleep, foods and feeding, bathing, clothing, mental work, vaccination, &c. Defined in this way sanitation would be dealt with chiefly by sanitary biologists, chemists, and engineers, while hygiene would be a subject for medical men or physiologists. He would therefore make no attempt to teach in medical schools more than the most general elementary principles of the above-mentioned (and some other) sanitary subjects, leaving them to engineers, chemists, and biologists. Freed from such subjects courses in hygiene might be given in medical schools which should be practically valuable to medical men. Finally, Dr. Sedgwick insists on the necessity of permanence of position for men engaged in the public health service.

Antiseptic Dusting Powders.

In an editorial paragraph on this subject the February number of the *St. Louis Courier of Medicine* says that antiseptic powders are extensively used in wounds to prevent the putrefaction of the fluids and to inhibit the growth of pyogenic bacteria. The United States Pharmacopœia of 1890 contained a number of valuable dusting powders, such as boric acid, acetanilid, bismuth salts, iodoform, &c., and in the eighth decennial revision two others have been added. The first of these is iodol, which bears the chemical name of tetraiodopyrrol, and is made by

the direct action of iodine on the base pyrrol in the presence of alcohol. It is a light greyish-brown, odourless, and tasteless powder, almost insoluble in water but soluble in fixed oils. It contains 89 per cent. of iodine and is a valuable antiseptic powder with less toxic power than iodoform. The second is a combination of thymol and iodine, which is extensively used under the name of aristol. It is a bright, chocolate-coloured, bulky powder, almost tasteless and having a slight aromatic odour. It is insoluble in water and glycerine, soluble with difficulty in alcohol, but readily soluble in fatty oils, ether, vaseline, chloroform, and collodion.

Feb. 5th.

Obituary.

WILLIAM HUGH HUGHES, M.R.C.S. ENG., L.S.A., J.P.

A FAMILIAR figure has been removed from Ashton-under-Lyne by the death of Mr. William Hugh Hughes. He had been resident there since 1861, the year in which he qualified. He was a student at the Manchester School of Medicine, one of the resident physicians' assistants at the Royal Infirmary, and was also for a time resident medical officer to the Chorlton Union Hospital. He had been the medical officer of health of Ashton for many years. He held many other appointments in Ashton, such as that of examining medical officer under the Factory and Workshops Act, and was also medical officer to the police force, to the workhouse, and to the Post-office. He was also honorary consulting surgeon to the Ashton-under-Lyne and District Infirmary and was a magistrate for the borough and also for the county of Lancashire. He was not a voluminous writer but had contributed articles on "The Responsibilities of Sanitary Authorities and the Operation of the Public Health Act" to the *Sanitary Record*. He was a genial, kindly man who will be regretted by his many friends.

GEORGE LOWSON, M.B., C.M. GLASG.

WE regret to learn of the death of Dr. George Lowson who passed away at his residence in William-street, Forebank, Dundee, on Feb. 10th. Early in his career he was associated with the jute industry but the influence of his uncle, the late Dr. Peter Baxter, directed his mind towards medicine. He studied in the University of Glasgow and graduated in 1890. His first appointment was as house surgeon to the Royal Infirmary at Greenock and thereafter he acted as assistant in Bilston and Manchester. He returned to his native city 13 years ago and set up in private practice in which he was successful. Two years ago Dr. Lowson met with an unfortunate accident which necessitated the loss of a limb and after the operation he never quite recovered his former cheerfulness and vigour. He was laid aside from active duty only ten days before his death owing to a severe cardiac attack. He is survived by a widow and three young children and his death is greatly mourned by all who knew him.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Johannes Kolaczek, extraordinary professor of surgery in the University of Breslau, at the age of 63 years.—Dr. Zielenziger, formerly one of the most respected practitioners in Potsdam and a poet of some repute. He was 85 years of age.—Dr. L. Schuster of Aix-la-Chapelle, well known as the author of many papers on neurological and dermatological subjects. He was 73 years of age.—Dr. J. Amann, extraordinary professor of gynæcology in the University of Munich. He had worked under Scanzoni in Würzburg and Sir J. Simpson in Edinburgh. After his return from abroad he organised special courses of instruction in gynæcology and established an out-patient and afterwards an in-patient clinic for the diseases of women in Munich. He was 74 years of age and had for several years lived in retirement. His best known works were on hysteria and puerperal fever.—Dr. Julius Cnopf of Nürnberg, a voluminous author and formerly an eminent practitioner, especially in children's diseases. He was 84 years of age.—Dr. J. V. Wichmann, director of the Queen Louisa Hospital for Children in Copenhagen, at the age of 53 years.—Dr. Holger Prip, *privat-docent* of children's diseases in the University of Copenhagen.—Dr. Aliprando Moriggia, formerly professor of histology and physiology in the University of Rome.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations in January last and having conformed to the by-laws and regulations of both Colleges, the diplomas of L.R.C.P. Lond. and M.R.C.S. Eng. have been conferred on them:—

Leonard Ernest Acomb, University College, Cardiff, and Middlesex Hospital; Edward Leicester Atkinson, St. Thomas's Hospital; Cecil Knight Attlee, B.A. Cantab., Cambridge University and St. Thomas's Hospital; John Stanley Avery, University College, Bristol; Alec Barber, St. Bartholomew's Hospital; Bertram Henry Barton, St. Bartholomew's Hospital; Arthur Beeley, University of Leeds; Cecil Bennett, St. Thomas's Hospital; Leonard Christopher Blackstone, University College Hospital; Richard Osmond Bodman, University College, Bristol; Charles William Bowle, B.A. Cantab., St. Thomas's Hospital; Douglas William Anderson Bull, B.A. Cantab., Cambridge University and St. George's Hospital; Robert Burgess, B.A. Cantab., Cambridge University and London Hospital; Wilfrid Buchanan Burr, L.D.S. England, Middlesex Hospital; George Chaikin, B.A. London, Sheffield and London Hospital; Arthur de Courcey Cranstoun Charles, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Herbert Drayton Clementi-Smith, St. Bartholomew's Hospital; Alfred Hollier Clough, Guy's Hospital; Owen Cunningham Preston Cooke, London Hospital; George Lissant Cox, Cambridge and Liverpool Universities; Norman Rowsell Cunningham, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Henley Frank Curl, B.A. Cantab., Cambridge University and London Hospital; Frank Bell Dalgleish, St. Thomas's Hospital; Arthur Percival Day, B.A. Cantab., Cambridge University and London Hospital; Horace Leigh Deck, University of Sydney and St. Bartholomew's Hospital; Carel Christiaan Alexander de Villiers, B.A., Guy's Hospital; Arthur Norman Dickson, Cambridge University and St. Thomas's Hospital; Alfred Dinnis, Charing Cross Hospital; Wilfrid Arthur Edwin Dobbin, University College, Cardiff, and St. Mary's Hospital; Guy Stanley Earl, St. George's Hospital; George Bennicke Edwards, London Hospital; John Evans, Cambridge University and St. George's Hospital; Thomas Llewellyn Evans, University College, Cardiff, and University College Hospital; Albert Henry Fardon, M.A. Cantab., Cambridge University and St. Thomas's Hospital; Arthur Roland Fisher, Leeds University and King's College Hospital; John Eugene Foreman, London Hospital; Archibald Thomas William Forrester, St. Bartholomew's Hospital; Charles Walter Gibson, Guy's Hospital; John Norman Glaister, University College Hospital; Jesse Mitchinson Potter Greil, B.A. Cantab., Cambridge University and King's College Hospital; Jonathan Grogono, London Hospital; Raby Montague Grogono, London Hospital; George Wilfrid Hardy, Leeds University; Robert Francis Hebbert, St. Thomas's Hospital; George Henry Heron, St. Mary's Hospital and Liverpool University; Victor Cyril Honeybourne, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Norman Gerald Horner, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Francis Rudolf Hotop, M.B., Ch.B. New Zealand, Otago University, New Zealand; Jacob Isaac Jaffé, Dublin and King's College Hospital; Robert Rutson James, St. George's Hospital; Edwin Clark Jones, St. Thomas's Hospital; Henry Travers Jones, University College Hospital; William Howard Jones, Manchester and St. Bartholomew's Hospital; Ernst Gregor Kellgren, B.A. Cantab., Cambridge University and St. George's Hospital; Thomas William Kirby, M.D., C.M. Trinity University, Toronto, Guy's Hospital; Harold Ernest Kitchen, B.A. Cantab., Cambridge, Manchester, and St. Mary's Hospital; Thomas Bramley Layton, Guy's Hospital; Albert Lawrence Loughborough, St. Thomas's Hospital; Alexander Henry McCandlish, London Hospital; Walter Sinclair McClure, Sheffield, University College, and London Hospitals; James Eustace Radclyffe McDonagh, St. Bartholomew's Hospital; Sydney Gray MacDonald, B.A. Cantab., Cambridge University and St. Thomas's Hospital; William John Ogilvie Malloch, B.A., M.B., University of Toronto, London Hospital; Leonard Myer, L.D.S. Eng., Guy's Hospital; Joseph Clement Arthur Norman, London Hospital; Norman Henry Oliver, L.D.S. Eng., Guy's Hospital; William Hunt Orton, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; William Stewart Orton, Guy's Hospital; Charles Max Page, St. Thomas's Hospital; Ernest William Mynall Paine, St. Bartholomew's Hospital; Jeffery Wimperis Parker, University College, Cardiff, and University College Hospital; Montague Claud Melville Pitkin, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Hugh Ridley Prentice, St. Bartholomew's Hospital; William Percy Purdom, Guy's Hospital; Hamilton Ernest Quick, B.Sc. Lond., St. Bartholomew's Hospital; Alan Randle, University College Hospital; Stanislaus Reader, Guy's Hospital; Marie Joseph Jean Roger Rigoulet, M.D. Paris, University of Paris; William Octavius Sankey, St. Thomas's Hospital; Edward Schenck, M.D. Freiburg, University of Freiburg; Francis Shingleton Smith, B.A. Cantab., Cambridge University and University College, Bristol; Charles Algernon Stidston, St. Bartholomew's Hospital; John Tate, University College Hospital; Gerald Maberley Taylor, London Hospital; Francis Thompson, London Hospital; Edward Mervyn

Thomson, St. George's Hospital; Arthur Christopher Watkin, University College Hospital; John Alexander Watt, University College Hospital; Leonard White, Westminster Hospital; Harold Beckwith Whitehouse, St. Thomas's Hospital; Edward Denis Whittle, University College Hospital; William Douglas Wilkins, M.B., Ch.B., Victoria University, Manchester; Edmund Wilkinson, University of Birmingham; Arthur Harold Williams, London Hospital and Durham University; Wilson Trevor Williamson, St. Bartholomew's Hospital; Christopher James Wilson, Cambridge University and London Hospital; Murray Richard Osmond Wilson, University College, Bristol; John Henry Wolfe, L.S.A., London Hospital; Harold Douglas Wyatt, Guy's Hospital; and William Arthur Bruce Young, M.B., Ch.B., Victoria University, Manchester.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—28 candidates presented themselves for Part I. of the Final Professional Examination for the Licence in Dental Surgery held on Feb. 2nd and 5th, of whom 16 were approved and 12 were rejected. The Council conferred the Diploma in Dental Surgery on the following gentleman who had completed both parts of the Final Professional Examination:—

George Woolford, Middlesex, Royal Dental, and National Dental Hospitals.

The Council also conferred the Diploma in Dental Surgery on the following two gentlemen, who had previously passed the necessary examinations and have now complied with the regulations:—

John Herbert Wilson Fitzgerald, Charing Cross and Royal Dental Hospitals; and George Edward Fritche, Middlesex and National Dental Hospital.

32 candidates presented themselves for Part I. of the examination for the Diploma in Public Health, of whom 22 passed. 21 candidates presented themselves for Part II., of whom 18 passed and were therefore entitled to the diploma. The Council therefore conferred the Diploma in Public Health (in conjunction with the Royal College of Physicians of London) upon them:—

Amelius Cyril Birt, L.R.C.P., M.R.C.S., St. Thomas's and King's College Hospitals; Henry Caird, M.B., Ch.B. Edin., Edinburgh and Liverpool Universities; Herbert Chesson, L.R.C.P., M.R.C.S., St. Mary's and University College Hospitals; John Moore Collyns, M.B. Lond., L.R.C.P., M.R.C.S., St. Bartholomew's Hospital; Gerald Corcoran, L.R.C.P. & S.I., Dublin and University College Hospital; James Gillies, M.B., C.M. Edin., Edinburgh University and University College Hospital; Frederic Harvey, Captain R.A.M.C., L.R.C.P., M.R.C.S., L.S.A., St. Bartholomew's and Royal Army Medical College; George Haylett Lock, L.R.C.P., M.R.C.S., Middlesex and University College Hospitals; Greer Edmund Malcomson, M.D. Lond., Manchester, Guy's, and Middlesex; Percy Knowles Muspratt, M.B., B.S. Camb., L.R.C.P., M.R.C.S., Cambridge and London Hospital; John Ford Northcott, M.D. Lond., L.R.C.P., M.R.C.S., Guy's and University College Hospitals; Owen Herbert Peters, M.B., Ch.B. Melb., Melbourne University and University College Hospital; John William Smyth Seccombe, Lieutenant, R.A.M.C., L.R.C.P., M.R.C.S., St. George's Hospital and Royal Army Medical College; Frank Blenkinsopp Skerrett, M.B. Lond., L.R.C.P., M.R.C.S., St. Thomas's and King's College Hospitals; Lessel Philip Stephen, Captain I.M.S., M.B., Ch.B. Aberd., Aberdeen University and Royal Army Medical College; Philip Graham Stock, L.R.C.P., M.R.C.S., Royal Army Medical College and University College, Bristol; Thomas Bassell Winter, Lieutenant-Colonel R.A.M.C., M.R.C.S., L.S.A., Guy's Hospital; and Cyril Haworth Wright, M.B., Ch.B. Edin., Edinburgh University and London Hospital.

PRESENTATION TO A MEDICAL PRACTITIONER.—On Feb. 7th the members of the Totterdown (Bristol) branch of the St. John Ambulance Brigade (marine section) presented Mr. J. J. Scammell Lucas, B.A., M.B. Lond., M.R.C.S. Eng., with a framed photograph of the members, suitably inscribed, as a mark of appreciation for his services as honorary instructor.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—The annual dinner of this society was held at the Hotel Great Central, London, on Feb. 7th, under the chairmanship of Mr. L. A. Bidwell, the president of the society, who proposed the usual loyal toasts, which were duly honoured. Mr. J. G. Pardoe was intrusted with the task of proposing the toast of "The Imperial Forces," which was responded to by Surgeon-General A. H. Keogh, Director-General of the Army Medical Service, who interested his audience on the question of the relation of the medical profession to war. He described how on the invitation of Mr. C. R. B. Keetley a course of lectures had been arranged to be delivered at the West London Hospital on Army Medical Instruction for a civilian medical reserve. In the course of a great war Great Britain would be depleted of the officers of the Royal Army Medical Corps and it was clear that the services of civilian medical men would be required in an executive capacity for duties in the home garrisons and hospitals. There was no doubt that a medical man who had received instructions concerning army matters and methods would be more useful in the Army Medical Service than a practitioner who was ignorant of the subject, and the course of lectures inaugurated at the West London Hospital was an attempt to provide the knowledge essential for the purpose. Surgeon-General Keogh concluded his eloquent appeal to the civilian members of the medical profession amid loud applause. The next toast was that of "The West London Medico-Chirurgical Society," which was submitted by Sir T. Lauder Brunton, who referred to the fact that the average attendance at the meetings of the society was greater than at any other society in London. The society had taken under its wing the post-graduate course at the West London Hospital and it was becoming a very great teaching centre. Mr. Bidwell, in the course of his acknowledgment of this toast, described how Dr. A. Elliot had helped in the most recent development of the society by instituting a pathological meeting, on which occasion more than 80 members were present. During his speech Mr. Bidwell announced that the membership of the society had increased to over 650 members and he congratulated those present on such a satisfactory condition of affairs. Mr. Bidwell also proposed the toast of "The Kindred Societies and Guests," which was duly acknowledged by the President of the Harveian Society, Dr. F. W. Cock, and Mr. G. F. Marshall, a member of the committee of management of the West London Hospital. The guests separated at a late hour after the rendering of some instrumental music and an exhibition of card tricks.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

AWDRY, WALTER ROBERT, M.B. Durh., M.R.C.S. Eng., has been re-appointed Medical Officer to the Berkeley (Gloucestershire) Hospital.

BRODIE, DEBOROUGH, M.B., B.S. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the Tetbury (Gloucestershire) Cottage Hospital.

BROWN, W. LANGDON, M.D. Cantab., M.R.C.P., has been appointed Medical Registrar and Demonstrator of Morbid Anatomy to St. Bartholomew's Hospital.

CARWARDINE, T., M.S., M.B. Lond., F.R.C.S., has been appointed Honorary Surgeon to the Bristol Royal Infirmary.

GEDGE, ARTHUR SYDNEY, M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer for the Fifth District by the Devizes Board of Guardians.

LITTLEJOHN, H. H., M.B., F.R.C.S. Edin., has been appointed Professor of Forensic Medicine in the University of Edinburgh.

MACGILVRAY, W. J. HOOKER, L.R.C.P., L.R.C.S., L.M. Edin., L.F.P.S Glasg., has been appointed Medical Referee to the General Life Assurance Co. for Districts of Rusholme and Fallowfield, Manchester.

MELLISH, JOHN STAFFORD, L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the Tetbury (Gloucestershire) Cottage Hospital.

SCOTT, T. GRAHAM, M.R.C.S., L.R.C.P. Lond., has been appointed Anæsthetist to the Dreadnought Hospital on Mondays.

SIMPSON, J. B., M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Hospital for Women and Children, Leeds.

WALKER, THOMAS WARBURTON, M.B., Ch.B. Vict., has been appointed Surgeon to the Tetbury (Gloucestershire) Cottage Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BLACKBURN AND EAST LANCASHIRE INFIRMARY. — Junior House Surgeon. Salary £70 per annum, with board, washing, &c.

BRISTOL ROYAL INFIRMARY.—House Physician. Salary £100 a year, with apartments, board and laundry. Also Surgical Registrar.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—House Physician. Salary £65 per annum, with board, residence, and laundry. Also Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, residence, and laundry.

DEVON COUNTY ASYLUM.—Third Assistant Medical Officer. Salary £125, rising to £155, with board, residence, and laundry.

EVELINA HOSPITAL, Southwark Bridge-road, London, S.E.—Assistant House Surgeon for three months. Salary at rate of £70 per annum, with board, residence, and washing.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's-buildings, Holborn circus, E.C.—Honorary Physician.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Assistant Surgeon.

HULL ROYAL INFIRMARY. — House Surgeon, unmarried. Salary 80 guineas per annum, with board and apartments.

INGHAM INFIRMARY AND SOUTH SHIELDS AND WESTOE DISPENSARY.—Assistant House Surgeon. Salary £75, with residence, board, and washing.

IPSWICH, EAST SUFFOLK AND IPSWICH HOSPITAL.—Third House Surgeon. Salary £50 per year, resident.

ITALIAN HOSPITAL, Queen-square, London, W.C.—Honorary Assistant Dental Surgeon.

LEEDS, HOSPITAL FOR WOMEN AND CHILDREN.—Honorary Assistant Surgeon.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £100, with board and lodging.

LEICESTER INFIRMARY.—House Surgeon. Salary £100 per annum, with board, apartments, and washing.

LIVERPOOL, DAVID LEWIS NORTHERN HOSPITAL.—Two House Surgeons. Salary £60 each per annum, with residence and maintenance.

LONDON TEMPERANCE HOSPITAL.—Assistant Resident Medical Officer for six months. Honorarium at rate of 50 guineas per annum, with board, residence, &c.

MANCHESTER PORT SANITARY AUTHORITY.—Medical Officer of Health. Salary offered £350 per annum, with out-of-pocket expenses.

METROPOLITAN EAR, NOSE, AND THROAT HOSPITAL, Grafton-street, Fitzroy-square, W.—Three Clinical Assistants and an Anæsthetist.

PUBLIC DISPENSARY, 59, Stanhope-street, Clare Market.—Resident Medical Officer, unmarried. Salary £105 per annum, with apartments, coals, and electric light.

ST. PETER'S HOSPITAL FOR STONE, &c., Henrietta-street, Covent Garden, W.C.—Junior House Surgeon for six months. Salary at rate of £50 a year, with board, lodging, and washing.

SETTLEMENT OF WOMEN WORKERS, Canning Town, E.—MEDICAL MISSION HOSPITAL.—Assistant Doctor for Dispensary (female). Board and residence.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon for six months. Salary £60 per annum, with rooms, board, and washing.

TORBAY HOSPITAL, Torquay.—House Surgeon. Salary £100 per annum, with residence, board, and washing.

TRURO, ROYAL CORNWALL INFIRMARY.—House Surgeon, unmarried. Salary £100 a year, with board and apartments.

WARWICK COUNTY LUNATIC ASYLUM.—Assistant Medical Officer. Salary £130, with board, apartments, and laundry.

WINCHESTER, CITY OF.—Medical Officer of Health. Salary £300 per annum.

WINCHESTER, ROYAL HANTS COUNTY HOSPITAL.—House Physician, unmarried. Salary £65 per annum, rising to £75, with board, residence, &c.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House Physician for six months. Honorarium at rate of £75 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

CARTER.—On Feb. 4th, at The Abbey House, Shaftesbury, Dorset, the wife of H. H. A. Carter, L.R.C.P. & S. Irel., of a daughter.

DAVIDSON.—On Feb. 8th, at Riverside Lodge, Teddington, the wife of Harold Davidson, M.R.C.S., L.R.C.P., of a son.

MARJORIBANKS.—On Feb. 3rd, at Caversham Lodge, Green-lanes, Harringay, N., to Dr. and Mrs. Robert Bruce Marjoribanks—a daughter.

MUNRO.—On Feb. 7th, at 56, Acre-lane, S.W., to Louise M. E. Munro and Donald J. Munro, M.B., B.S.—a son.

MARRIAGES.

BENNION—TENNENT.—On Jan. 30th, at St. Stephen's Church, Hampstead, John Menlove Bennion, M.A., M.B., B.C. Cantab., elder son of John Rowe Bennion, Nursted House, Petersfield, to Dora Lydia Vere, daughter of the late R. L. Tennent, Sheriff-substitute of Renfrewshire.

GILMORE—CARR.—On Feb. 14th, at St. James' Church, Spanish-place, Owen E. Gilmore, M.D., F.R.C.S., to Matty, youngest daughter of the late Mr. and Mrs. Lascelles Carr of Curt-y-vil, Glamorganshire.

HADFIELD—MACDOUGALL.—On Feb. 14th, at St. Bartholomew's the Great, West Smithfield, Charles F. Hadfield, M.A., M.R.C.S., L.R.C.P., to Wine-Field Elizabeth, youngest daughter of Alex. W. MacDougall, Esq., Barrister-at-Law.

DEATHS.

BAYLEY.—On the 25th ult., at Bournemouth, Reginald Bayley, M.R.C.S., formerly of Vine House, Kingston-on-Thames.

DURHAM.—On the 14th February, at 20, Ellerdale-road, N.W., Mary Durham, widow of the late Arthur E. Durham, F.R.C.S., consulting surgeon to Guy's Hospital. (No flowers, by request.)

FAIRCLOUGH.—On Feb. 11th, at Knowle Cottage, Mirfield, aged 58 years, Thomas Butter Fairclough, surgeon.

HUGHES.—On Feb. 11th, at Harwood, Ashton-under-Lyne, William Hugh Hughes, M.R.C.S., L.S.A., J.P.

LOWSON.—At Duncraig, William-street, Dundee, on the 10th inst., George Lowson, M.B., C.M., aged 42 years.

PARSONS.—On Feb. 10th, at Friarn Lodge, Bridgwater, Francis John Crane Parsons, M.R.C.S., L.R.C.P., youngest son of the late John Parsons, aged 58 years.

WINSLOW.—On the 7th instant, at 36, Sandgate-road, Folkestone, Florence Jessie, wife of Dr. L. Forbes Winslow, of 11, Burwood-place, Hyde Park, and daughter of the late Dr. J. Michell Winn, of Harley-street, London.

WOOD.—On Feb. 8th, at Lewes-crescent, Brighton, Frederick Wood, F.R.C.S. Eng., in his 87th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE SOUTH AND SOUTH-WEST COAST SYNDICATE.

Two rogues trading under the above title at 156, Stamford-street, London, S.E., were sentenced on Feb. 9th to three years' penal servitude and eighteen months' hard labour respectively, their names being William Davenport and Vyvyan H. Moyle, a clerk in Holy Orders. Their offence was contained in a number of counts, the chief one being conspiracy to defraud. Among other visionary schemes which they put forward as a means of extracting money from their dupes was one which, according to a certificate put in at the trial, was the means "of bringing back to life apparently dying—and even actually dead—human beings." This, prisoners' counsel explained, was an apparatus for keeping up artificial respiration. In their advertisements they also promised enormous profits from a fishing scheme. They have got their deserts, but what we wish to point out is that they obtained the ear of the public to great extent by advertising and we consider that the proprietors of magazines who inserted their advertisements are morally just as guilty as the prisoners themselves. We have before us a copy of the *Navy Magazine* for November, 1905, published by Messrs. Pearson, Limited, of Henrietta-street, and on the page of advertisements which comes next to the table of contents we see the advertisement of the syndicate. The first sentences of this effusion run: "£1 a day and 12 per cent. a year for each £50 withdrawable deposit. Minimum £25, maximum £1000. Capital and interest absolutely secured by British Mortgage Bonds." Any advertisement editor who inserted this drivel in good faith must be either singularly ignorant or else singularly credulous. That the concern must be fraudulent is evident on the face of it.

WHAT WAS THE CAUSE?

WE have received the following communication from a lady whose name we omit but we think that the letter will interest our readers.

To the Editors of THE LANCET.

SIRS,—I am interested in surgery and especially ovariotomy. Can any medical man give me some information on the bursting of the pedicle? A London surgeon and professor of surgery recently operated in a case known to me. He was asked to take particular care in securing the pedicle. The caution came from *occult* sources. He promised to do so; nevertheless the knot slipped in a few hours. The hæmorrhage was stopped but paralysis of the stomach followed and the patient died from the effects of the pump. Has any surgeon knowledge of a patient recovering from such paralysis? What was the probable cause?

I am, Sirs, yours faithfully,

——.

UNWELCOME VISITORS.

To the Editors of THE LANCET.

SIRS,—I am requested by my committee to thank you for your article "Unwelcome Visitors" and at the same time to point out that the experience of our members, who call on medical men, enables them to say emphatically that it is only very rarely they are deemed unwelcome. The great majority of representatives are men of infinite tact and discretion and the most unlikely persons to outstay their welcome or transgress the canons of good taste in any way. That our wares are of interest to the profession at large was evidenced by the large attendance of medical men at the London Medical Exhibition in October last, and if the writer of the article referred to would notice the evident pleasant relations which exist between the "Persecuted" and the representative at the various medical exhibitions he would possibly refer to us as *necessary* rather than "unwelcome visitors."

I am, Sirs, yours faithfully,

J. R. BAILEY, Honorary Secretary.

The St. Vincent Association, Devonshire-square, E.C.,
Feb. 13th, 1906.

THE ESTIMATION OF ATMOSPHERIC DUST.

MANY methods have been suggested to ascertain the amount of dust contained in the air of large cities. The best known of these consists in drawing a known volume of air through a cotton or glass wool filter and in weighing the filter before and after the operation. In other processes the number of the dust particles is calculated, for which purpose an apparatus is employed by means of which the air is drawn against a plate covered with a moist substance and the adherent dust particles are afterwards counted by the aid of a microscope. A novel method of an especially simple and practical kind is described by Dr. Alfred Gradenwitz in the *Scientific American* of Feb. 3rd. It is the invention of Dr. Vörner of Leipsic and Professor F. Hofmann and is based on the counting of dust particles, weight not being taken into account. In constructing his apparatus Dr. Vörner availed himself of the fact that the dust deposited on polished black surfaces is easily seen. A blackened resinous substance was therefore melted and allowed to solidify on a glass plate in a horizontal position. On observation

under the microscope the fresh surface was seen to show an absolute uniformity and a perfect polish. Though ordinary daylight was quite sufficient for the examination of these dark plates it was found to be better to use an incandescent gas lamp at a fixed distance from the plate, the light being concentrated by a convex lens and striking the plate at an angle of about 37°. In order to keep the resin plates free from dust up to the moment when the experiment is started Dr. Vörner placed a glass ring three-quarters of a millimetre in height on the semi-liquid resinous mass, and on it was placed a watch-glass, the space between the glass ring and watch-glass being filled with vaseline. In carrying out an experiment the watch-glass is removed and an exposure is made for ten minutes, after which it is replaced in position, the resin plate is observed under the microscope, and the number of dust particles per square centimetre is calculated.

WANTED—A SUGGESTION FOR TREATMENT.

To the Editors of THE LANCET.

SIRS,—I have at the present time under treatment what would be considered in hospital practice an "interesting case"—of catalepsy—in a girl, 23 years of age. The attacks have occurred for the past 12 months periodically, upon an average every six weeks, when she passes into a sound, peaceful sleep for from eight to 15 days. The conjunctival reflex is never abolished. She takes nourishment, consisting of milk and eggs and beef-tea, fairly well throughout; but at times this diet she refuses, when she is fed artificially by nutrient suppositories. She has slight uterine prolapse, with backward displacement, for which she wears a watch-spring pessary. She suffers also from menorrhagia and takes iron and astringents during the intervals of her somnolency. She is generally constipated for several days which is relieved by a five-grain dose of calomel. The girl, though not robust, has had no serious illness nor does she suffer from "nerves" or hysterical fits and her family history is unimportant. On awaking from sleep her health does not appear to be in the least affected. She remembers nothing but is quite prepared to partake of food. If any readers of THE LANCET would kindly make any suggestion in this distressing case as to what steps (if any) should be adopted to curtail or eventually cure my patient of her malady, I should feel greatly obliged. I am, Sirs, yours faithfully,

Putney, S.W., Feb. 6th, 1906. J. FRENCH BLAKE.

APPLIANCES FOR THE PROTECTION OF WORKMEN EMPLOYED IN DANGEROUS TRADES.

WE have received from Messrs. Wallach Bros. of 57, Gracechurch-street, London, E.C., an illustrated list of their appliances in use in coal mines, chemical works, on board ship, by fire brigades, &c. Notable among the life-saving appliances illustrated and described is the portable oxygen supply equipment, including a patent oxygen apparatus for the use of rescue parties. There is also a nasal air purifier which presents important advantages and we may mention also that important adjunct to the equipment of rescue parties, a miner's electric safety lamp. The list includes some well designed respirators.

SUPERCILIARY GYMNASTICS.

To the Editors of THE LANCET.

SIRS,—It may be interesting to your correspondents on this subject to hear of another case. I am able to raise either eyebrow at will keeping the other steady or frowning with it. I can also move the right or left ear while the other is steady, or both of them together voluntarily. Moreover, I have the power to move both nostrils without inhaling air, while every other feature of the face is perfectly still. I am, Sirs, yours faithfully,

Feb. 10th, 1906. K. W.

*** We have received other letters showing that the feats enumerated by our correspondents are not very rare. For this reason we do not think that it is necessary to record further instances.—ED. L.

WANTED—A HOME.

To the Editors of THE LANCET.

SIRS,—I write to ask if any of your readers could kindly furnish me with useful information and advice. A friend of mine has three children (aged nine years, five years, and one year and eight months) recently recovered from measles and now suffering from whooping-cough. In each case bronchial, gastric, and nervous disturbance is well marked. The eldest is exceedingly nervous and is, I fear, tuberculous; the youngest is becoming exhausted owing to vomiting; and the remaining child suffering, though in less degree, from nervous depression and gastric irritation. In these circumstances skilful nursing is essential to the children's safety, but unfortunately their mother cannot either carry out instructions or furnish accurate report; their father is compelled to absent himself on business all day and the mother will not brook the introduction of a skilled nurse. If the children could be taken into a home where they would be properly nursed the father would gladly pay a reasonable amount and be very grateful for necessary information, as he considers the children's lives are at stake.—Thanking you in anticipation of satisfactory answer, I am, Sirs, yours faithfully,

Feb. 13th, 1906. MEDICUS.

Holmes.—The occupation mentioned by our correspondent might prejudice his chances if he resumed practice after leaving his proposed post. We do not know that the General Medical Council would take any official cognizance of such a matter, unless a medical man, not being professionally employed, should none the less make use—i.e., improper use—of his professional status.

ERRATA.—In the letter from our Paris Correspondent which appeared in THE LANCET of Feb. 10th, in the paragraph headed "The Treatment of Hydatid Cysts of the Liver," the name "Canut" in line 1 should read "Quénu"; in line 11 it should read "Broca."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (19th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (3 P.M.).

TUESDAY (20th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.).

WEDNESDAY (21st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.).

THURSDAY (22nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.).

FRIDAY (23rd).—London (2 P.M.), St. Batholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.) Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), St. Mark's (2.30 P.M.).

SATURDAY (24th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (19th).—MEDICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—9 P.M. Lettsomian Lecture:—Mr. C. A. Pallance: Some Points in the Surgery of Brain Abscess. (Lecture II.)

TUESDAY (20th).—PATHOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Prof. A. S. Grünbaum: General Sarcomatosis of the Pia Mater.—Dr. H. G. Bushnell: (1) Case of Leukæmia; (2) Case of Lymphocythæmia without Lymphatic Enlargement.—Dr. J. Bernstein: (1) Phlegmonous Gastritis; (2) Doubling of Spinal Cord.—Mr. S. G. Shattock: Primary Squamous-celled Carcinoma of Male Urethra.

SOCIETY OF ANÆSTHETISTS (20, Hanover-square, W.).—8.30 P.M. Paper:—Prof. F. W. Keeble: Action of Anæsthetics on Lower Forms of Life.

THERAPEUTICAL SOCIETY (Apothecaries' Hall, Blackfriars).—4.30 P.M. Conversazione. Mr. T. Maberly: The Preparation of Antidiphtheritic Serum (illustrated by lime light views).—Dr. S. Tidey: Clouds and Climate.—Mr. P. Clark: Some Uses of High Frequency Currents.

WEDNESDAY (21st).—ROYAL METEOROLOGICAL SOCIETY (70, Victoria-street, Westminster, S.W.).—7.30 P.M. Paper:—Mr. W. B. Newton: The Dispersal or Prevention of Fogs.

FRIDAY (23rd).—CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Mr. J. Sherren: Three Cases of Intestinal Obstruction.—Mr. H. W. Carson: Three Cases of Appendicitis due to Transposition of Viscera.—Mr. J. D. Malcolm: A Case of Appendix Abscess with Severe Hæmorrhage.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (19th).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. H. J. Paterson: Some of the Results of Gastric Surgery. (Lecture I.)
MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. W. Evans: Clinique. (Skin). 5.15 P.M. Lecture:—Dr. G. A. Sutherland: Tuberculous Peritonitis.
POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Hood: Mitral Stenosis.
TUESDAY (20th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. E. Cautley: Clinique. (Medical.) 5.15 P.M. Lecture:—Mr. H. B. Robinson: Some Unusual Forms of Hernia.
POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. M. Moullin: Cancer of the Uterus.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Clinical Lecture:—Sir W. Gowers.
NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M. Dr. G. B. Price: Pathological Demonstration.
ROYAL INSTITUTION OF GREAT BRITAIN (Albemarle-street, W.).—5 P.M. Prof. W. Stirling: Food and Nutrition. (Lecture III.)
WEDNESDAY (21st).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. H. J. Paterson: Some of the Results of Gastric Surgery. (Lecture II.)
MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. E. Owen: Clinique. (Surgical.) 5.15 P.M. Lecture:—Dr. R. Hutchison: Dilatation of the Stomach.
POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Dr. Beddard: Practical Medicine.
UNIVERSITY COLLEGE HOSPITAL (Gower-street, W.C.).—4 P.M. Clinical Lecture:—Dr. S. Martin: Acute Pleurisy with Effusion.
CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M. Demonstration:—Mr. C. Nourse: Nasal Accessory Sinuses.
HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Maguire: Bronchiectasis.
THURSDAY (22nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M. Lecture:—Dr. R. Hutchison: Chronic Gastritis.
POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—5 P.M. Mr. Baldwin: Practical Surgery.
CHARING CROSS HOSPITAL.—4 P.M. Mr. Gibbs: Demonstration of Surgical Cases. (Post-Graduate Course.)
SAMARITAN FREE HOSPITAL FOR WOMEN (Marylebone-road, N.W.).—3 P.M. Lecture:—Mr. Doran: Clinical Features of Diseases of the Fallopian Tubes.
ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—6 P.M. Dr. M. Dockrell: Treatment (Constitutional and Local in all its forms). (Chesterfield Lecture.)
MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Fitzroy-square, W.).—5 P.M. Lecture:—Dr. F. P. Weber: Climates and Health Resorts in Tuberculosis. (Post-Graduate Course.)
HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Lecture:—Dr. Batten: Scurvy.
NORTH-EAST LONDON POST-GRADUATE COLLEGE (Tottenham Hospital, N.).—4.30 P.M. Dr. H. Cooper: Demonstration on Electro-Diagnosis.
FRIDAY (23rd).—ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. H. J. Paterson: Some of the Results of Gastric Surgery. (Lecture III.)
MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. R. Clarke: Clinique. (Eye.)
POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.). 5 P.M. Dr. Abraham: Cases of Skin Disease.
NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury, W.C.).—3.30 P.M. Clinical Lecture:—Dr. A. Turner: Chorea.

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THE INDEX TO THE LANCET.

THE Index and Title-page to Vol. II. of 1905, which was completed with the issue of Dec. 30th, were given in THE LANCET of Jan. 6th, 1906.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)
THE LANCET Office, Feb. 15th, 1906.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Feb. 9	29·73	N.W.	0·12	66	42	32	Fzn.	34	Fine
,, 10	29·28	S.W.	0·13	56	50	33	42	42	Raining
,, 11	28·87	S.W.	3·12	72	42	39	37	39	Windy
,, 12	29·46	W.	0·04	64	43	33	32	33	Cloudy
,, 13	29·47	S.W.	..	71	42	33	34	36	Windy
,, 14	29·63	S.W.	0·02	75	47	32	33	34	Fine
,, 15	29·56	S.W.	0·12	46	43	34	40	41	Cloudy

During the week marked copies of the following newspapers have been received: *Yorkshire Post, Morning Post, Bolton Chronicle, Bristol Mercury, Westminster Gazette, Birmingham Post, Daily Telegraph, Hampshire Advertiser, Southampton Echo, Acton Gazette, Morning Advertiser, Daily News, Wolverhampton Midland Express, Newcastle Chronicle, Herts Mercury, Scientific American, Glasgow Herald, Hyde Reporter,* &c.

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